Project Research

Study Report on the Guidelines for the Management of Safety for Construction Works in Japanese ODA Projects

Final Report

Samples of Practical Tool for Safety Construction Management on Site

＜Volume 3/3＞

July 2013

Japan International Cooperation Agency (JICA)

The Overseas Construction Association of Japan, Inc.

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Composition of the Outcomes

The outcomes of the Project Research: "Study Report on the Guidelines for the Management of Safety for Construction Works in Japanese ODA Projects" are composed of the 3 volumes shown below.

This volume is the "Samples of Practical Tool for Safety Construction Management on Site" of the reports. See each report, other than this, for the "Main Text," and "Guidelines (Preliminary Draft)."

First of the 3 volumes:

Main Text	
Introduction	Background of Working out the Guidelines (Preliminary Draft)
Chapter 1	Outline of the Field Study Results
Chapter 2	Current Status of Safety Management in Construction Works in Advanced Countries
Chapter 3	Review on Other Guidelines
Chapter 4	Outline of the Guidelines for the Management of Safety for Construction Works
Chapter 5	Considering the Operation Policy on the Guidelines

Second of the 3 volumes:

Guidelines (preliminary draft)	
Chapter 1	General Rules
Chapter 2	Basic Policies for Safety Management
Chapter 3	Contents of the "Safety Plan"
Chapter 4	Contents of the "Method Statements on Safety"
Chapter 5	Technical Guideline for Safe Execution (by the Type of Work)
Chapter 6	Technical Guideline for Safe Execution (by the Type of Accident)

Third of the 3 volumes: This document.

Samples of Practical Tool for Safety Construction Management on Site
1. Risk Assessment Form
2. Operating Instructions
3. Record of Meetings
4. Weekly & Monthly Report
5. Site Inspection Check Sheet
6. Occupational Safety & Health Management System
7. Partnership with Locals etc.

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Samples of Practical Tool for
Safety Construction Management on Site

<Volume 3/3>

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Preface

This Safety Construction Management Booklet is the sequel to the educational material for construction workers drawn up in the Study on Safety Management for ODA Construction Work in Japanese ODA Project, February 2012.

This booklet is to be available to personnel concerned with ODA construction projects, especially the Contractors and the Engineers for the purpose of improving site control, periodical checkout and mitigating risks in order to ensure safety management. It is expected to be used mainly as a reference material to overall controllers, personnel in charge of safety measures and head offices of contractors and engineers.

We wish all entities concerned with the projects to utilize the booklet for enhancing safety management awareness and promoting safety management activities in ODA construction works.

July, 2013

1 Risk Assessment Form

1.1 Case Example 1-1

1) Outline

All possible hazards are listed for each type of work. Considering the effect to each stakeholder (including the Employer, the Contractor, the public, visitors, and young people), degree of seriousness is reckoned in numerical value. Then, degree of seriousness is multiplied by frequency rate to calculate the total risk of each type of work.

Additionally, the risk rate after taking corresponding measures on risk control is re-calculated. If the risk rate is greater than the standard rate, this type of work cannot be launched due to the site regulations.

2) Case Example

The Case Example 1-1 is on the following page.

Risk Assessment Form

Case Example 1-1

PROJECT
OCCUPATIONAL, HEALTH, SAFETY and REHABILITATION PLAN

RISK ASSESSMENT

RISK ASSESSMENT PREPARED BY

APPLICABLE METHOD STATEMENT

(C)HEALTH & SAFETY CONSEQUENCE
S1 NEGLIGIBLE/NO EFFECT
S2 MINOR INJURIES
S3 MAJOR INJURIES
S4 FATALITIES

(C)ENVIRONMENTAL CONSEQUENCE
E1 NO EFFECT
E2 MINOR EFFECT
E3 MAJOR EFFECT
E4 IRREVERSIBLE

(F) FREQUENCY
1 NEGLIGIBLE
2 UNLIKELY
3 LIKELY
4 PROBABLE

(RR)RISK RATING (CONSEQUENCE©xFREQUENCY(F))
1-4 INSIGNIFICANT WORK PROCEED
5-8 ACCEPTABLE WORK PROCEED
9-12 SUBSTANTIAL WORK MUST NOT START
13-16 INTOLERABLE WORK MUST NOT START

Reference	Activities	Hazard	Consequence	People affected						Before			Risk Control Measures	After Control		
				E	CON	PUB	VIS	YP	OTHER	C	F	RR		C	F	RR

E : Employer
CON : Contractor
PUB : Public

VIS : Visitor
YP : Young People

1.2 Case Example 1-2

1) Outline

This is a feedback from the Contractor to the risk assessment prepared by the Engineer, an extract from the occupational safety and health documents which the Contractor submits to the Engineer. The Engineer's request to manage occupational safety and health suitable for local regulations and environment is granted by the Contractor who states that the Safety Plan Document is reviewed accordingly.

This is the case example, which shows both the Engineer and the Contractor acknowledge the importance of risk assessment and perform in coordination with each other.

2) Case Example

The Case Example 1-2 is on the following page.

Risk Assessment Form	Case Example 1-2 ①

RFA Number [ ] Transmittal Ref:

	Date :
	Rev.:
	RFA Type:

REQUEST FOR APPROVAL (RFA)

To : The Engineer	From : The Contractor
Reference in Contract :	RFA Title :
Work Package : S/C RFA No :	Company : Representative :
Submitted by : EHS ☐ MEP ☐ QA/QC ☐ Engineering ☐	
Note: The attached Health and Safety Plan has been updated as per the comments received on Revision C of the same.	
RFA has been produced by : RFA has been reviewed by :	Expected Work Start on :
RFA has been approved by PM :	Signed : .....
We enclose (1) set for your comments/approval	

Received Date & Sign	.....

ENGINEER'S APPROVAL / COMMENT (EAC)

Engineer's Representative Name :	Signed :	Date :
Engineer's Assistant Name :	Signed :	Date :

Approval Status :
A Approved, no exception taken. No re-submittal required. Proceed with manufacture fabrication and/or construction.
B Approved with Comment, incorporate comments, resubmit within 7 days. Proceed with manufacture, fabrication and/or construction.
C Rejected, incorporate comments and re-submit. Do not proceed with manufacture, fabrication and/or construction.

ITEM	COMMENTS	STATUS
1		
2		
3		
4		
5		
6		
7		
8		

Risk Assessment Form	Case Example 1-2 ②

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

JV REPLY TO COMMENTS ON REV C

Please note the following in response to the comments received on revision C of MAR-0038. We have revised the previously submitted documents as noted below and have enclosed the revised extracts for your review and approval.

ITEM	COMMENTS	JV RESPONSE
1	Person in-change of Emergencies on Site	Project Emergency Contact List updated and attached in Section 19 of PEHSP
2	Dust Prevention should be added under this section.(Appendix 1 – EMP Section 8)	Please see additional to Section 8 (8.1 & 8.2)
3	User of phrase “if practicable” shall be deleted under this section. (Appendix 1 – EMP Section 12)	Has been deleted.
4	Any description that can be expressed more concretely shall take way. Eg. Wheel washing roller or spray nozzle (Appendix 1 – EMP Section 12)	Wheel washing facilities (Wash Through) included with washing jet spray has been specified. We have thoroughly reviewed and updated the document and addressed the specific example.
5	Water pollution mitigation-Surface Run-off - Additional	Section 12.2 Environmental Control Details has been added as requested and reiterated on control measures in surface run off.
6	The word remain ‘marine’, Marine shall be deleted.	The word ‘marine’ has been removed from the Risk assessment as shown in Appendix 1 Project Environmental Management Plan.
7	Section 13-Risk Assessment Requested to re-examine the RA based on construction content and local condition	These have been reviewed and updated, please see Appendix 1 Environmental Management plan section13.
8	You are requested to submit revised “Work Method Statement for Environmental Monitoring Works together with revised Project Environmental Management Plan.	Attached Revised “Work Method Statement for Environmental Monitoring Works” and revised Project Environmental Plan Rev D.

Risk Assessment Form	Case Example 1-2 ③

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

ITEM	COMMENTS	JV RESPONSE
9	The Environmental Manager has still not been confirmed as of today. When can this key person be on board	The resume of Environmental Manager has been approved by XXX on 02nd. July 2012. Refer to XXX No:

ISSUE AND REVISION COPNTROL

Rev.	Amendment	Submittal date	Approval Date	Approval Status
A	First Draft for 9 comment	22 Mar 12	9 Apr 12	C
B	Revised with changes incorporating comments from XXX and amendments to JV operational health and safety procedures.	7 Apr 12	4 May 12	C
C	Revised with changes incorporating comments from XXX and amendment to JV to JV operational health and Safety procedures.	12 June 12	25 June 12	C
D	Revised with changes incorporating comments from XXX and amendments to JV operational health and safety procedures.	4 July 12	TBA	TBA

1.3 Case Example 1-3

1) Outline

First, all hazards are identified for each category of work (Excavation and Backfill, Working at Height, Operations for Heavy Machinery and for Electricity). Then, the effects of the hazards are considered to rank risks of each type of work. Contents of specific measures such as wearing Personal Protective Equipment (PPE) or devising work procedures are to be filled in the last column (Case Example 1-3-1).

Moreover, near miss incidents (i.e. potentially serious incidents) are also to be reported likewise more serious accidents in the same format (Case Example 1-3-2). Near miss incidents, which are more likely to occur, as subjects, more data will be collected for conducting an analysis on risk assessment.

2) Case Example

The case examples 1-3-1 and 1-3-2 are on the following pages.

Risk Assessment Form	Case Example 1-3-1 ①

Project name
Health and Safety Plan

Appendix 7: Sample of Risk Assessment and Management

Risk Assessment and Management

Project: _____ Country: _____
Contractors Name: _____ Contract No.: _____

Task: Excavation and Backfill

Identify Hazard (Potential to do harm)	**Hazard effect** (if the Hazard is released)	**Risk Ranking**	**Control Measures** (PPE, Procedures, etc.)	**Recovery Measures**

Approved: Name: _____ Signature: _____ Title: _____

Prepared: Name: _____ Signature: _____ Title: _____

Risk Assessment Form	Case Example 1-3-1 ②

Project name
Health and Safety Plan

Risk Assessment and Management

Project: _____ Country: _____

Contractors Name: _____ Contract No.: _____

Task: Working at Height

Identify Hazard (Potential to do harm)	**Hazard effect** (if the Hazard is released)	**Risk Ranking**	**Control Measures** (PPE, Procedures, etc.)	**Recovery Measures**

Approved: Name: _____ Signature: _____ Title: _____

Prepared: Name: _____ Signature: _____ Title: _____

Risk Assessment Form	Case Example 1-3-1 ③

Appendix 7: Sample of Risk Assessment and Management

Project name
Health and Safety Plan

Risk Assessment and Management

Project: _____ Country: _____

Contractors Name: _____ Contract No.: _____

Task: Heavy Lifting Operations

Identify Hazard (Potential to do harm)	**Hazard effect** (if the Hazard is released)	**Risk Ranking**	**Control Measures** (PPE, Procedures, etc.)	**Recovery Measures**

Risk Assessment Form	Case Example 1-3-1 ④

Project name
Health and Safety Plan

Risk Assessment and Management

Project: _____ Country: _____

Contractors Name: _____ Contract No.: _____

Task: Electricity

Identify Hazard (Potential to do harm)	**Hazard effect** (if the Hazard is released)	**Risk Ranking**	**Control Measures** (PPE, Procedures, etc.)	**Recovery Measures**

Approved: Name: _____ Signature: _____ Title: _____

Prepared: Name: _____ Signature: _____ Title: _____

Risk Assessment Form	Case Example 1-3-2 ①

Project Name:

Health and Safety Plan

FR: IAR-1/3

Appendix 4: Accident / Near Miss Report

INCIDENT / ACCIDENT REPORT

To: File No.:_____

Details (To be completed by site engineer in charge within 24 hours)

Project: _____ Country _____

Contractors Name:_____ Contract No.: _____

Location of Incident:_____ Date:_____ Time:_____

Weather Condition: FINE[ ] RAIN[ ] COLD[ ] HOT[ ]

Visibility: _____ Temperature _____

Name of Injured: _____ Nationality: _____

Dale of Birth: Day _____ Month _____ Year_____ ID NO.:_____

Sex: Male[ ] Female[ ] Occupation: _____

Activity at time of Accident: _____

_____

Severity of Injury: Fatal[ ] Referred to Hospital[ ] Sent Home[ ] Return to Work[ ]

Parts of Body Injured

Head	[ ]	Torso	[ ]
Eyes	[ ]	Back	[ ]
Ears	[ ]	Abdomen	[ ]
Face	[ ]	Hip	[ ]
Neck	[ ]	Rump	[ ]
Shoulder	[ ]	Thigh	[ ]
Arm	[ ]	Leg	[ ]
Elbow	[ ]	Knee	[ ]
Wrist	[ ]	Foot	[ ]
Hand	[ ]	Ankle	[ ]
Finger	[ ]	Toe	[ ]
Chest	[ ]		
Other:			

Types of Injury

Crush	[ ]
Fracture	[ ]
Dislocation	[ ]
Sever	[ ]
Laceration	[ ]
Puncture Wound	[ ]
Abrasion	[ ]
Bruise	[ ]
Sprain / Strain	[ ]
Electric Shock	[ ]
Burn	[ ]
Multiple	[ ]
Other:	

Witness

Name: _____ Company:_____ ID No: _____

Name: _____ Company:_____ ID No: _____

Name: _____ Company:_____ ID No: _____

Risk Assessment Form	Case Example 1-3-2 ②

Project Name:

Health and Safety Plan

FR: IAR-2/3

Appendix 4: Accident / Near Miss Report

How did Accident Occur	
Description: _____	Sketch(Continued on separate sheet if necessary)

How could this accident have been avoided

State: _____

(mark x one)

A – Requirements / Guidelines not prepared

B - Requirements / Guidelines not appropriate

C - Requirements / Guidelines not complied

A	B	C	Descriptions
			Leadership and Accountability
			Risk Assessment and Management
			People, Training and Behaviours
			Working with Contractors and Others
			Facilities Design and Construction
			Operation and Maintenance
			Management of Charge
			Information and Documentation
			Customers and Products
			Community and Stakeholder Awareness
			Crisis and Emergency Management
			Incident Analysis and Prevention
			Assessment, Assurance and Improvement

Dose Incident relate to the one of the following:

If Yes, mark appropriately

	Emergency Isolation
	Ground Disturbance
	Confined Space Entry
	Working at Height
	Lifting Operations
	Vehicle Safety
	Management of Change

Does Incident relate to Dropped Objects?

Yes	
No	

Action to prevent reoccurrence

No.	Action	Responsible Person	Priority	Due Time
1				
2				
3				
4				
5				
6				

Risk Assessment Form	Case Example 1-3-2 ③

Project Name:

Health and Safety Plan

FR: IAR-3/3

Appendix 4: Accident / Near Miss Report

What Action is being taken to Prevent Reoccurrence?

State_____

_____

_____ Action: Yes[ ] No[ ] Date: _____

Other Comments:_____

Name:_____ Signature: _____ Title:_____

Follow-up Review (To be completed by the Engineer's Safety Department)

Do all actions taken meet the Engineer's satisfaction？ Yes[ ] No[ ]

If No, please state further actions required: _____

Close out: Yes[ ] No[ ] Date:

Name_____ Signature: _____ Title: _____

The Engineer's Review and Comments

_____

_____

Report to the Employer: Yes[ ] No[ ] Lost Work Days:_____Light Duty Days:_____

Name:_____ Signature: _____ Title: _____

Distribution: The Employer, The Engineer, Construction Manager, Safety Manager_____

1.4 Case Example 1-4

1) Outline

In this case example, all possible types of accidents (including hazards and hazardous components) are identified for each type of work, and then they are considered to rate degree of seriousness. Degree of seriousness is multiplied by frequency rate to calculate the risks (which helps to decide the priorities of the countermeasures to be taken). Finally, after considering risk mitigation plans, they are listed to evaluate the risks after taking measures. It is notable that even with risk mitigation plans conducted; risk will not be zero as possibility of risk still remains. This case example resembles the Case Example 1-1.

This particular format is used for common construction work. Other formats for road construction, bridge construction, etc. are also available. Users can select to use appropriate format depending on the specific type of work and characteristics. It is considered as an example that the head office of corporation which accepted an offer and obtained OHSAS18001 tends to cope with safety management of overseas projects by a group of inspectors/persons in charge visiting applicable construction sites. .

2) Case Example

The Case Example 1-4 is on the following page.

Risk Assessment Form

Case Example 1-4 ①

1. Risk Management Sheet for Common Construction Procedures

	Type of work	Risky machinery, tools, materials	Legislation	Common operation	Identification of potential risks (assumed accidents)	seriousness : a	Degree of possibility:b	Evaluation : a*b	Priority	Emergency event	Specific measures for risk mitigation (prevention measures of harmfulness/dangerousness)	Priority on taking measures	PPE : Personal Protective Equipment	Who?	Re-seriousness : a	Degree of recurrence : b	Re-evaluation : a*b	Risks remained
1	Operation on stepladders and ladders etc.	Stepladders, ladders, tools	LAW No.1 Year 1970 regarding Work Safety		Falling off a ladder	6	8	48	5		Refrain from using heavy and lengthy objects during operation	A	Safety belts	Workers	6	2	12	3
											Refrain from operation by leaning forward	A						
											Refrain from operation that generate reflective force	A						
											Refrain from using ladders without treads	EN						
											Refrain from using ladders of the height of over 1.8m	EN						
					Toppling of a ladder	6	4	24	4		Refrain from using ladders at steps and slopes	A		Workers	6	2	12	3
											Refrain from using ladders on the temporary covers for open pits	A						
											Pay attention to sleeve holes etc. during operation	A						
											Refrain from extending legs of ladders especially on steps	EN						
											Ensure to set a blade latch properly	EN						
					Falling off a ladder when getting on and getting off	6	2	12	3		Refrain from carrying huge or lengthy objects while getting on and getting off a ladder	A		Workers				
											Refrain from jumping off a ladder	A						
					Breaking of a scaffolding of a ladder	6	2	12	3	O	Pay attention to sleeve holes etc. during operation	A		Workers				
											Ensure to set a blade latch properly	A						
											Ensure three point mountaining of a ladder	A						
											Ensure to attach both sides of scaffold boards properly and tightly	EN						
2	Operations on portable scaffoldings	Portable scaffoldings, tools			Falling down scaffoldings	6	8	48	5		Refrain from using heavy and lengthy objects during operation	A	Safety belts	Workers	6	2	12	3
											Refrain from operation that generate reflective force	A						
											Refrain from bending forward during operation	A						
											Refrain from having more than 2 persons working on a portable scaffolding	A						
											Refrain from stepping onto one portable scaffolding from another	A						
					Unstable portable scaffoldings and toppling	6	4	24	4		Adjust the length of legs properly, especially when using it on rough surface and at steps	EN		Workers	6	2	12	3
											Refrain from using ladders on the temporary covers for open pits	A						
											Pay attention to sleeve holes etc. during operation	A						
											Ensure to set a blade latch properly	EN						
											Refrain from extending legs of portable scaffolding especially on steps	EN						
					Falling off a ladder when getting on and getting off	6	2	12	3		Refrain from getting on and getting off a portable scaffolding with a heavy or lengthy object	A		Workers				
											Refrain from jumping off a portable scaffolding	A						
3	Operations on framework scaffoldings	framework scaffoldings, stage planks, ladders, vertical nets, tools			Falling off scaffoldings	10	4	40	5		Ensure preventive measures such as handrails and safety nets etc. are checked thoroughly	A	Safety belts	Foreman	6	2	12	3
											If preventive measures are not available, ensure to use safety belts	P						
					Breaking and breaking apart of scaffoldings	6	4	24	4		Inspect scaffoldings before starting operation	A		Workers	6	2	12	3
											Keep the total weight allowed on scaffoldings below the regulation	A						
											Ensure to attach both sides of scaffold boards properly and tightly (and ensure to lock supplementary posts properly)	EN						

Risk Assessment Form	Case Example 1-4 ②

LAW No.1 Year 1970 regarding Work Safety

			Falling off scaffoldings when getting on and getting off from improper steps	10	4	40	5		EN		Workers	10	1	10	3
4	Crane operations	Crane operation tools, lifted loads	Inspection of crane equipment not carried out	6	2	12	3	Check on the crane operation tools such as: shackles, clamps and wire ropes etc., before operation	A	Safety belts	Person in charge for crane operations				
								Dispose of defective equipment and materials	EL						
			Inappropriate crane operations	6	2	12	3	Select the proper crane operation process and tools that are suitable for target loads before the launch of operation (length, shape and weight etc.)	EN		Person in charge for crane operations				
			Workers entering into crane operation area	6	2	12	3	Evacuate from the working radius before the launch of operation	A		Crane operator				
								Launch of operation after confirmation of workers' evacuation	A						
								Call for other worker's attention by whistles or microphones	A						
			Lifted loads moving back and forth and then hitting some other objects	10	4	40	5	Set a hook right above lifting loads	A		Crane operator	10	1	10	3
								Check the balance of lifted loads just after hanging it	A						
								Re-do if unbalanced condition is recognized	EN						
								Use assisting rope to minimize piling	EN						
			Falling of lifted loads	10	4	40	5	Ensure to fix lifted loads tightly and use appropriate lifting tools such as wire-net sack etc.	EN		Crane operator	10	1	10	3
								Use a crane of appropriate standard according to the weight of loads	EN						
			Third persons' break-in to the crane operation area	6	2	12	3	Set an off-limit rule for the crane operation space	A		Person in charge for crane operations				
5	Operations with movable cranes	Movable cranes, lifted loads	Common Operation 4: Crane Operations												
			Inspection of crane equipment not carried out	6	2	12	3	Check on the crane operation tools such as: shackles, clamps and wire ropes etc., before operation	A	Safety belts	Person in charge for crane operations				
								Dispose of defective equipment and materials	EL						
			Inappropriate crane operations	6	2	12	3	Select the proper crane operation process and tools that are suitable for target loads before the launch of operation (length, shape and weight etc.)	EN		Person in charge for crane operations				
			Workers entering into crane operation area	6	2	12	3	Evacuate from the working radius before the launch of operation	A		Crane operator				
								Launch of operation after confirmation of workers' evacuation	A						
								Call for other worker's attention by whistles or microphones	A						
			Lifted loads moving back and forth and then hitting some other objects	10	4	40	5	Set a hook right above lifting loads	A		Crane operator	10	1	10	3
								Check the balance of lifted loads just after hanging it	A						
								Re-do if unbalanced condition is recognized	EN						
								Use assisting rope to minimize piling	EN						
			Falling of lifted loads	10	4	40	5	Ensure to fix lifted loads tightly and use appropriate lifting tools such as wire-net sack etc.	EN		Crane operator	10	1	10	3
								Use a crane of appropriate standard according to the weight of loads	EN						
			Third persons' break-in to crane operation area	6	2	12	3	Set an off-limit rule for the crane operation space	A		Person in charge for crane operations				
			Overturn of a crane	6	4	24	4	Use an appropriate crane (calculate and plan with 90% of the total capacity)	EN		Person in charge	6	1	6	2
								Check the ground first and fully extend outriggers	EN		Operators				
								Strictly follow the safe working load defined at zero loading capacity (crane carrying type)	A						

Risk Assessment Form

Case Example 1-4 ③

											Continuous measurement of lifted loads by measuring gauges through the operation	A						
											Always check the warning light and stop operation when its color changes from blue to yellow	A						
											Check the length and angle of the jib and decide the weight of lifted loads accordingly	EN						
											Check on lifting weight properly (crane carrying type)	A						
											Follow the proper operation suitable for the machine performance, especially for the safe working load etc.	A						
					Collision with a crane	10	4	40	5		Set an off-limit rule for the crane operation space	A		Chief worker				
											Prohibit moving backward	A		Operators				
											Follow the direction guided by site conductors	A						
											Install a safety motion sensor except small rotating type cranes	EN						
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
6	Excavation by a hydraulic shovel	Hydraulic shovel, earth and sand	LAW No.1 Year 1970 regarding Work Safety		Rolling down of a hydraulic shovel	6	2	12	3		Refrain from approaching too close to road shoulders, top of the slopes, or the ditches	A	Safety belts and reflective vests for traffic navigator	Operators				
											Check the stability of natural ground before starting the operation	A		Chief worker				
					Use of a hydraulic shovel for improper purposes	6	4	24	4		Do safety management under the instruction of operation manager	A		Operators	6	2	12	3
											Use a hydraulic shovel with crane function (excavator)	EN		Chief worker				
					Collision with a hydraulic shovel	10	4	40	5		Set an off-limit rule for the crane operation space	A		Chief worker	10	1	10	3
											Prohibit moving backward	A		Operators				
											Follow the direction guided by site conductors	A						
											Install a safety motion sensor except small rotating type cranes	EN						
					Collision with a dump truck	6	2	12	3		Drive only on instructed routes and roads	A		Drivers				
											Follow the direction guided by site conductors	A						
					Inconsistency of signs	6	2	12	3		Confirm the signs before starting operation and give the signs in a good sight of the driver	A		Flagmen				
					Falling into excavation area	6	2	12	3		Set guardrails to prevent automobiles and persons from falling down	EN		Chief worker				
											Set an appropriate tool for getting on and getting off and fix it well	EN						
7	Trucks (including dump trucks)	Trucks (including dump trucks)			Collision between a truck and a site conductor	10	4	40	5		Guide within the truck driver's visual range	A	Safety belts and reflective vests for traffic navigator	Site conductor	10	1	10	3
					Falling down of a truck	6	2	12	3		Allocate site conductors	A		Foreman				
											Display connectable equipment	A		Foreman				
											Pay good attention to traffic hazard assessment and study the conveyance route well	A						
					Falling down the rear deck of a running vehicle	6	4	24	4		Refrain from transferring with staying on the rear deck	A		Workers	1	1	1	1
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
					Collision with a truck	6	2	12	3		Allocate site conductors	A		Workers				
8	Installation of steel sheets	Piling machine, piles of steel sheets			Temporarily-piled steel sheets falling apart	10	2	20	4		Decide the appropriate height of piles (and the number of steel sheets) then manage them accordingly	A		Foreman	10	1	10	3

Risk Assessment Form

Case Example 1-4 ④

			LAW No.1 Year 1970 regarding Work Safety		Lightweight steel sheets are bent by pressure	10	1	10	3		Refrain from forceful pile driving and adopt vibration driving	S		Foreman				
				Common Operation 5: Movable cranes	Inspection of crane equipment not carried out	6	2	12	3		Check on the crane operation tools such as: shackles, clamps and wire ropes etc. before operation	A	Safety belts	Person in charge for crane operations				
											Dispose of defective equipment and materials	EL						
					Inappropriate crane operations	6	2	12	3		Select the proper crane operation process and tools that are suitable for target loads before the launch of operation (length, shape and weight etc.)	EN		Person in charge for crane operations				
					Workers entering into crane operation area	6	2	12	3		Evacuate from the working radius before the launch of operation	A		Crane operator				
											Launch of operation after confirmation of workers evacuation	A						
											Call for other worker's attention by whistles or microphones	A						
					Lifted loads moving back and forth and then hitting some other objects	10	4	40	5		Set a hook right above lifting loads	A		Crane operator	10	1	10	3
											Check the balance of lifted loads just after hanging it	A						
											Re-do if unbalanced condition is recognized	EN						
											Use assisting rope to minimize jolting	EN						
					Falling of lifted loads	10	4	40	5		Ensure to fix lifted loads tightly and use appropriate lifting tools such as wire-net sack etc.	EN		Crane operator	10	1	10	3
											Use a crane of appropriate standard according to the weight of loads	EN						
					Third persons' break-in to crane operation area	6	2	12	3		Set an off-limit rule for the crane operation space	A		Person in charge for crane operations				
					Overturn of a crane	6	4	24	4		Use an appropriate crane (calculate and plan with 90% of the total capacity)	EN		Person in charge	6	1	6	2
											Check the ground first and fully extend outriggers	EN		Operators				
											Strictly follow the safe working load defined at zero loading capacity (crane carrying type)	A						
											Continuous measurement of lifted loads by measuring gauges through the operation	A						
											Always check the warning light and stop operation when its color changes from blue to yellow	A						
											Check the length and angle of the jib and decide the weight of lifted loads accordingly	EN						
											Check on lifting weight properly (crane carrying type)	A						
											Follow the proper operation suitable for the machine performance, especially for the safe working load etc.	A						
					Collision with a crane	10	4	40	5		Set an off-limit rule for the crane operation space	A		Chief worker	10	1	10	3
											Prohibit moving backward	A		Operators				
											Follow the direction guided by site conductors	A						
											Install a safety motion sensor except small rotating type cranes	EN						
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
9	Ground excavation	Hydraulic shovels, dump trucks, bulldozers, earth and sand		Common Operation 6: Rolling down of a hydraulic shovel	Rolling down of a hydraulic shovel	6	2	12	3		Refrain from approaching too close to road shoulders, top of the slopes, or ditches	A	Safety belts and reflective vests for traffic navigator	Operators				
											Check the ground stability before the launch of operation	A		Chief worker				
					Use of a hydraulic shovel for improper purposes	6	4	24	4		Do safety management under instruction of operation manager	A		Operators	6	2	12	3

Risk Assessment Form

Case Example 1-4 ⑤

											Use a hydraulic shovel with crane function (excavator)	EN		Chief worker				
					Collision with a hydraulic shovel	10	4	40	5		Set an off-limit rule for the crane operation space	A		Chief worker	10	1	10	3
											Prohibit moving backward	A						
											Follow the direction guided by site conductors	A						
											Install a safety motion sensor except small rotating type cranes	EN						
					Collision with a dump truck	6	2	12	3		Drive only on instructed routes and roads	A		Drivers				
											Follow the direction guided by site conductors	A						
					Inconsistency of signs	6	2	12	3		Confirm the signs before starting operation and give the signs in a good sight of the driver	A		Flagmen				
					Falling into excavation area	6	2	12	3		Set guardrails to prevent automobiles and persons from falling down	EN		Chief worker				
											Set an appropriate tool for getting on and getting off and fix it well	EN						
				Common Operation 7: Dump trucks	Collision between a truck and a site conductor	10	4	40	5		Guide within the truck driver's visual range	A	Safety belts and reflective vests for traffic navigator	Site conductor	10	1	10	3
					Rolling down of a truck	6	2	12	3		Allocate site conductors	A		Foreman				
											Display connectable equipment	A		Foreman				
											Pay good attention to traffic hazard assessment and study the conveyance route well	A						
					Falling down the rear deck of a running vehicle	6	4	24	4		Refrain from transferring with staying on the rear deck	A		Workers	1	1	1	1
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
					Collision with a truck	6	2	12	3		Allocate site conductors	A		Workers				
					Collision with a bulldozer	10	2	20	4		Refrain from crossing a path just before and after the pass of a bulldozer	A		Foreman	10	1	10	3
											Clearly design and draw the working space and keep it a off-limit zone	A		Foreman				
					Workers being buried alive by landslides	10	8	80	5		Manage the height of the excavation surface and always maintain the equilibrium slope	A		Chief worker	10	2	20	4
10	Base concrete placing	Concrete pump vehicles, concrete mixing vehicles, vibrators, concrete	LAW No.1 Year 1970 regarding Work Safety	Common Operation 7: Trucks (substitute usage、準用？)	Collision between a truck and a site conductor	10	4	40	5		Guide within the truck driver's visual range	A	Safety belts and reflective vests for traffic navigator	Site conductor	10	1	10	3
					Rolling down of a truck	6	2	12	3		Allocate site conductors	A		Foreman				
											Display connectable equipment	A		Foreman				
											Pay good attention to traffic hazard assessment and study the conveyance route well	A						
					Falling down the rear deck of a running vehicle	6	4	24	4		Refrain from transferring with staying on the rear deck	A		Workers	1	1	1	1
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
					Collision with a truck	6	2	12	3		Allocate site conductors	A		Workers				
					Overturn of a concrete pump vehicle	6	2	12	3		Check the ground first and fully extend outriggers	EN	Protective masks, protective glasses and vibration proof globes	Operators				
					Collision with a bucket	10	1	10	3		Refrain from approaching close to buckets while they are moving	A		Workers				
11	Fabrication and dismantling of frameworks	Movable cranes, trucks, round saws, boards, timbers		Common Operation 5: Movable cranes	Inspection of crane not carried out	6	2	12	3		Check on the crane operation tools such as: shackles, clamps and wire ropes etc. before operation	A	Safety belts	Person in charge for crane operations				

Risk Assessment Form

Case Example 1-4 ⑥

			LAW No.1 Year 1970 regarding Work Safety								Dispose of defective equipment and materials	EL						
					Inappropriate crane operations	6	2	12	3		Select the proper crane operation process and tools that are suitable for target loads before the launch of operation (length, shape and weight etc.)	EN		Person in charge for crane operations				
					Workers entering into crane operation area	6	2	12	3		Evacuate from the working radius before the launch of operation	A		Crane operator				
											Launch of operation after confirmation of workers evacuation	A						
											Call for other worker's attention by whistles or microphones	A						
					Lifted loads moving back and forth and then hitting some other objects	10	4	40	5		Set a hook right above lifting loads	A		Crane operator	10	1	10	3
											Check the balance of lifted loads just after hanging it	A						
											Re-do when someplace is unbalanced	EN						
											Use assisting rope to minimize jolting	EN						
					Falling of lifted loads	10	4	40	5		Ensure to fix lifted loads tightly and use appropriate lifting tools such as wire-net sack etc.	EN		Crane operator	10	1	10	3
											Use a crane of appropriate standard according to the weight of loads	EN						
					Third persons' break-in to crane operation area	6	2	12	3		Set an off-limit rule for the crane operation space	A		Person in charge for crane operations				
					Overturn of a crane	6	4	24	4		Use an appropriate crane (calculate and plan with 90% of the total capacity)	EN		Person in charge	6	1	6	2
											Check the ground first and fully extend outriggers	EN		Operators				
											Strictly follow the safe working load defined at zero loading capacity (crane carrying type)	A						
											Continuous measurement of lifted loads by measuring gauges through the operation	A						
											Always check the warning light and stop operation when its color changes from blue to yellow	A						
											Check the length and angle of the jib and decide the weight of lifted loads accordingly	EN						
											Check on lifting weight properly (crane carrying type)	A						
											Follow the proper operation suitable for the machine performance, especially for the safe working load etc.	A						
					Collision with a crane	10	4	40	5		Set an off-limit rule for the crane operation space	A		Chief worker	10	1	10	3
											Prohibit moving backward	A		Operators				
											Follow the direction guided by site conductors	A						
											Install a safety motion sensor except small rotating type cranes	EN						
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
				Common Operation 7: Trucks	Collision between a truck and a site conductor	10	4	40	5		Guide within the truck driver's visual range	A	Safety belts and reflective vests for traffic navigator	Site conductor	10	1	10	3
					Rolling down of a truck	6	2	12	3		Allocate site conductors	A		Foreman				
											Display the road shoulder	A		Foreman				
											Pay good attention to traffic hazard assessment and study the conveyance route well	A						
					Falling down the rear deck of a running vehicle	6	4	24	4		Refrain from transferring with staying on the rear deck	A		Workers	1	1	1	1
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
					Collision with a truck	6	2	12	3		Allocate site conductors	A		Workers				

Risk Assessment Form

Case Example 1-4 ⑦

			LAW No.1 Year 1970 regarding Work Safety		Getting a cut by cutting blades	10	1	10	3		Carry out inspection of blade safety sensors before staring operation	A	Protective masks, protective glasses and safety belts	Workers				
					Workers' clothes or globes getting entangled in a machine	6	2	12	3		Carry out inspection of working clothes before starting operation	A		Workers				
12	Concrete placement	Concrete pump vehicles, concrete mixing vehicles, concrete vibrators		Common Operation 7: Trucks (substitute usage、準用？)	Collision between a truck and a site conductor	10	4	40	5		Guide within the truck driver's visual range	A	Safety belts and reflective vests for traffic navigator	Site conductor	10	1	10	3
					Rolling down of a truck	6	2	12	3		Allocate site conductors	A		Foreman				
											Display the road shoulder	A		Foreman				
											Pay good attention to traffic hazard assessment and study the conveyance route well	A						
					Falling down the rear deck of a running vehicle	6	4	24	4		Refrain from transferring with staying on the rear deck	A		Workers	1	1	1	1
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
					Collision with a truck	6	2	12	3		Allocate site conductors	A		Workers				
					Collapse of framework structures	10	8	80	5		Double check the strength of false work	A	Protective masks, protective glasses and vibration proof globes	Foreman	10	1	10	3
											Check the condition of concrete form shoring framework	A		Workers				
											Divide the loads (weight) into several groups	A		Foreman				
					Rolling down of a concrete pump vehicle	6	2	12	3		Check the ground first and fully extend outriggers	EN		Operators				
					Workers getting stuck by equipment	10	2	20	4		Wearing protective equipment (gloves)	P		Operators	8	2	16	3
13	Setting and removal of temporary construction	Movable cranes, trucks, building materials		Common Operation 5: Movable cranes	Inspection of crane equipment not carried out	6	2	12	3		Check on the crane operation tools such as: shackles, clamps and wire ropes etc. before operation	A	Safety belts	Person in charge for crane operations				
											Dispose of defective equipment and materials	EL						
					Inappropriate crane operations	6	2	12	3		Select the proper crane operation process and tools that are suitable for target loads before the launch of operation (length, shape and weight etc.)	EN		Person in charge for crane operations				
					Workers entering into crane operation area	6	2	12	3		Evacuate from the working radius before the launch of operation	A		Crane operator				
											Launch of operation after confirmation of workers evacuation	A						
											Call for other worker's attention by whistles or microphones	A						
					Lifted loads moving back and forth and then hitting some other objects	10	4	40	5		Set a hook right above lifting loads	A		Crane operator	10	1	10	3
											Check the balance of lifted loads just after hanging it	A						
											Re-do if unbalanced condition is recognized	EN						
											Use assisting rope to minimize jolting	EN						
					Falling of lifted loads	10	4	40	5		Ensure to fix lifted loads tightly and use appropriate lifting tools such as wire-net sack etc.	EN		Crane operator	10	1	10	3
											Use a crane of appropriate standard according to the weight of loads	EN						
					Third persons' break-in to the crane operation area	6	2	12	3		Set an off-limit rule for the crane operation space	A		Person in charge for crane operations				
					Overturn of a crane	6	4	24	4		Use an appropriate crane (calculate and plan with 90% of the total capacity)	EN		Person in charge	6	1	6	2
											Check the ground first and fully extend outriggers	EN		Operators				
											Strictly follow the safe working load defined at zero loading capacity (crane carrying type)	A						

Risk Assessment Form	Case Example 1-4 ⑧

			LAW No.1 Year 1970 regarding Work Safety								Continuous measurement of lifted loads by measuring gauges through the operation	A						
											Always check the warning light and stop operation when its color changes from blue to yellow	A						
											Check the length and angle of the jib and decide the weight of lifted loads accordingly	EN						
											Check on lifting weight properly (crane carrying type)	A						
											Follow the proper operation suitable for the machine performance, especially for the safe working load etc.	A						
					Collision with a crane	10	4	40	5		Set an off-limit rule for the working space	A		Chief worker	10	1	10	3
											Prohibit moving backward	A		Operators				
											Following guides by site conductors	A						
											Install a safety motion sensor except small rotating type cranes	EN						
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
				Common Operation 7: Trucks	Collision between a truck and a site conductor	10	4	40	5		Guide within the truck driver's visual range	A	Safety belts and reflective vests for traffic navigator	Site conductor	10	1	10	3
					Rolling down of a truck	6	2	12	3		Allocate site conductors	A		Foreman				
											Display the road shoulder	A		Foreman				
											Pay good attention to traffic hazard assessment and study the conveyance route well	A						
					Falling down the rear deck of a running vehicle	6	4	24	4		Refrain from transferring with staying on the rear deck	A		Workers	1	1	1	1
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Check on anchor wires etc.	A		Foreman				
					Collision with a truck	6	2	12	3		Allocate site conductors	A		Workers				
					Falling down during fabrication or dismantling of temporary structures	6	2	12	3		Using a safety belt properly with a main rope	A		Foreman				
		Cubicle, power distribution boards, power lines electrical tools, generators			Electrical shock by incomplete coverage	10	2	20	4		Checkup with an insulation resistance meter	EN		Qualified person	6	1	6	1
											Check on the inspection record	A		Foreman				
					Electrical shock by a lack of an earthing device	10	2	20	4		Check on the setup resistance value	A		Qualified person	6	1	6	1
											Check on the installation condition	A		Foreman				
					Malfunction of a power distribution board	6	2	12	3		Check on power distribution boards periodically	EN		Qualified person	6	1	6	1
											Display connectable equipment	A						
14	Placing short struts and walings	Movable cranes, H type steels		Common Operation 5: Movable cranes	Inspection of crane equipment not carried out	6	2	12	3		Check on the crane operation tools such as: shackles, clamps and wire ropes etc. before operation	A	Safety belts	Person in charge for crane operations				
											Dispose of defective equipment and materials	EL						
					Inappropriate crane operations	6	2	12	3		Select the proper crane operation process and tools that are suitable for target loads before the launch of operation (length, shape and weight etc.)	EN		Person in charge for crane operations				
					Workers entering into crane operation area	6	2	12	3		Evacuate from the working radius before the launch of operation	A		Crane operator				
											Launch of operation after confirmation of workers' evacuation	A						
											Call for other worker's attention by whistles or microphones	A						
					Lifted loads moving back and forth and hitting some other objects	10	4	40	5		Set a hook right above lifting loads	A		Crane operator	10	1	10	3

Risk Assessment Form	Case Example 1-4 ⑨

			LAW No.1 Year 1970 regarding Work Safety								Check the balance of lifted loads just after hanging it	A						
											Re-do if unbalanced condition is recognized	EN						
											Use assisting rope to minimize jolting	EN						
					Falling of lifted loads	10	4	40	5		Ensure to fix lifted loads tightly and use appropriate lifting tools such as wire-net sack etc.	EN		Crane operator	10	1	10	3
											Use a crane of appropriate standard according to the weight of loads	EN						
					Third persons' break-in to crane operation area	6	2	12	3		Set an off limits rule at working areas	A		Person in charge for crane operations				
					Overturn of a crane	6	2	12	3		Using cranes with proper capacities	EN		Person in charge	6	1	6	2
											Check the ground first and fully extend outriggers	EN		Operators				
											Comply strictly with load ratings (crane carrying type)	A						
											Continuous measurement of lifted loads by measuring gauges through the operation	A		Operators				
											Always check the warning light and stop operation when its color changes from blue to yellow	A						
											Check the length and angle of the jib and decide the weight of lifted loads accordingly	EN						
											Check on lifting weight properly (crane carrying type)	A						
											Follow the proper operation suitable for the machine performance, especially for the safe working load etc.	A						
					Collision with a crane	10	4	40	5		Set an off-limit rule for the crane operation space	A		Chief worker	10	1	10	3
											Prohibit moving backward	A		Operators				
											Follow the direction guided by site conductors	A						
											Install a safety motion sensor except small rotating type cranes	EN						
					Equipment falling from rear deck and hitting workers during conveyance	6	2	12	3		Confirmation of slings installment	A		Foreman				
					Collapse of short struts and false work by mal-assembly	10	2	20	4		Appoint and allocate chief workers	A		Foreman	10	1	10	3
					Falling down of short struts and walings	10	2	20	4		Fix short struts and walings with wedges etc.	EN		Workers	10	1	10	3
					Falling from a short strut	10	2	20	4		Using a safety belt properly with a main rope	A		Chief worker	10	1	10	3
15	Gas welding and meltdown operation	Gas welding machines, oxygen, acetylene			Eye injury by spark during cutting operation	6	2	12	3		Wearing protective equipment (glasses)	P	Protective glasses, masks, gloves for welding operation, safety belts	Workers				
					Gas cylinder catching fire	10	2	20	4		Set backfire preventive measure to a gas cylinder	EN		Workers	10	1	10	3
					Fire breakout	10	2	20	4		Refrain from placing combustible materials around	A		Workers	10	1	10	3
											Detecting gas leakage by using soap water	EN						
											Avoiding sunlight using coverings etc.	EN						

2 Operating Instructions

2.1 Case Example 2-1

1) Outline

Case Example 2-1-1 is one of the corporate documents which informs persons concerned with the project to suspend the operation until project recommencement approval by the relevant division after taking proper countermeasures.

In relation to the above, this document is used as notification in the case a sort of hazard had been identified through corporate inspection but no countermeasure has been taken yet. This is a final notification to urge whoever in concern to take immediate actions for safety countermeasures within a given deadline (Case Example 2-1-2).

2) Case Example

The Case Examples 2-1-1 and 2-1-2 are on the following pages.

Operating Instructions	Case Example 2-1-1

Pause Notice

Safety Department No.

_____Section:

Safety production is a basic principle of enterprise management, by inspection, your section has a severe hazard which is not able to comply with the relevant regulations. This notice is to inform you to suspend your operation on _ ,until approval by project department after correction.

C.C

Date:

Operating Instructions	Case Example 2-1-2

Notice of Potential Risk Correction

Project Department　　Safety Serial No.

Unit: '

Responsibility

Last inspection found there was a potential hazard, and notified you of correction in the name of project department with safety serial No,_, but still stay unchanged until now. For safety, health and smooth production, this is a final notice of taking prompt action to rectify the present status by the date of _.

C.c.

Date:

2.2 Case Example 2-2

1) Outline

These two case examples show a checklist targeting for cranes operated under mechanized construction (Case Example 2-2-1) and a defect notification form on them (Case Example 2-2-2). The former consists of 12 check items and each check item is supposed to be filled out by a crane operator. Should one fault be found on a crane truck, the latter will be noticed and the crane truck cannot be in operation according to the site regulations. In the latter format, a crane operator should describe a fault found on a crane, for which a manager of lifting operation needs to take countermeasures and describes them in details (such as when, where and what).

2) Case Example

The Case Examples 2-2-1 and 2-2-2 are on the following pages.

Operating Instructions	Case Example 2-2-1

Form S2 **Report No:**

CRANE INSPECTION CHECKLIST

At the beginning of each shift or working when the crane is in use, the crane operator should carry out the following routine checks:

1. Access to the cranes cabin is free from grease or other slippery substance, which may cause a person to slip.
2. Boom is not twisted, swayed or dropped.
3. Apparent defects on the slewing table and chassis.
4. Hook block is not cracked, opened up or deformed.
5. Safety catch on the hook is not cracked, opened up or deformed.
6. Swivel ball is able to rotate freely. (If any)
7. Hoisting wire ropes are free from kink, corrosion or fraying.
8. Winch drums and winches are free from visible defects.
9. House keeping in the cabin is good.
10. All safety devices including warning horn, hoisting limit switch, trolley limit switch, slewing limit switches and overloading alarm are in good working order.
11. Clutch and brakes are in good working order.
12. Counter-weight blocks are properly sited.

All items must be properly checked and entered into record by the crane operator.
✓ -Good **X** -Defective (Problem) **C** - Corrected
No one shall operate the crane if any one of the above is not in order
Inform the lifting supervisor in-charge immediately.

Item	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Remarks
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
Initial								

Name of Operator: _____ Date: From _____ To: _____

I.D. No: _____

_____

Operating Instructions	Case Example 2-2-2

Form S3 **Report No: .....**

CRANE FAULT NOTIFICATION FORM

Name and Signature of Operator: _____
Crane to be operated: Mobile/Crawler/Tower LM No:
_____
Location of Crane: _____
Date of Inspection: _____
Date of Notification: _____
Name of Lifting Supervisor: _____

The operator of the above mentioned crane wished to inform you (the Lifting Supervisor) that the crane has the following faults/defects after my routine check:

_____
_____
_____
_____
_____
_____
_____
Please arrange to make it good.

REMEMBER ACTION TAKEN BY LIFTING SUPERVISOR
(State below Whom, What & When remedial action to be done)

_____
_____
_____
_____
_____
_____
_____

ACTION COMPLETED
(State Date & Time)

_____
_____
_____
_____
_____

Name and Signature of Lifting Supervisor:
_____/_____Date / Time: _____

2.3 Case Example 2-3

1) Outline

This form is a sample of work permission based on the statistics that there have been lots of accidents in which many newly-employed workers have been involved (Case Example 2-3-1). The types of dangerous work (such as working in confined space, in high temperature, in excavation, under high-voltage cables, and near public facilities), details of work, risk mitigation measures etc. are listed. A newly-employed construction worker is to sign this document agreeing to work under aforementioned conditions and cancellation of permit.

Similar to the above is a permission of loading operation after temporary construction work (Case Example 2-3-2). It is important as the possibility of accidents under temporary construction work is higher. Listed in this document are check items such as formwork, falsework, strutting, excavation and others. It can be recognized it is a good example in that a number of inspectors simultaneously check the temporary construction works in order to secure the safety.

2) Case Example

The Case Examples 2-3-1 and 2-3-2 are on the following pages.

Operating Instructions	Case Example 2-3-1

Project Name:

OCCUPATIONAL, HEALTH, SAFETY and REHABILITATION PLAN

PACKAGE C

PERMIT TO WORK – PF48				
WEIP/PKG___/___/48 REF*	SITE	PERMIT NO.	DATE	PERMIT VALIDITY ( )DAYS: Max 7 days

PERMIT REQUIRED FOR: PART 1

☐ CONFINED SPACE ☐ HOTWORK ☐ TO DIG ☐ CLOSE PROXIMITY TO OVERHEAD POWER LINES ☐ CLOSE TO UTILITIES ☐ OTHER(pls-state)

DETAILS OF WORK TO BE CARRIED OUT:

RISK CONTROL MEASURES TO BE APPLIED: (REFER TO RISK ASSESSMENT IF NECESSARY)

SPECIFIC ATMOSPHERE MONITORING:

☐O2(19% min)☐CH4(air-5% LEL/0.25 volume)☐CO(50 ppm)☐H2S(10 ppm)☐NO2(3 ppm)☐OTHER

AUTHORIZATION:

I certify that the location specified and detailed above has been inspected and all the precautions detailed have been taken. Subject to the said precautions being taken, the work detailed can proceed.

Signed: Date: Time: Print Name:

RECEIPT:

I certify that I have read and understood this permit and I shall ensure that the precautions detailed in PART ONE are taken:

Signed: Date: Time: Print Name:

CLEARANCE:

The work detailed in PART ONE has been/not been completed and all the equipment and personnel have been withdrawn from the area.

Signed: Date: Time: Print Name:

CANCELLATION:

This permit is hereby cancelled.

Signed: Date: Time: Print Name:

Operating Instructions	Case Example 2-3-2

Project Name

PROCEDURE NO.16-SAFETY MANAGEMENT

PERMIT TO LOAD/CONTINUE – PF 83

WORKS SECTION/LOCATION: DATE:
WEIP/PKG...../.....
REF:

1. TEMPORARY WORKS ITEM (PLEASE TICK)

☐ FORMWORK ☐ FALSEWORK ☐ STRUTTING ☐ EXCAVATION

☐ OTHER (PLEASE STATE)

2. INSPECTION DETAILS

A JOINT INSPECTION IS REQUESTED FOR THE ABOVE TEMPORARY WORKS TO ALLOW THE FOLLOWING ACTIVITY OF:

TO PROCEED

DATE OF INSPECTION: REQUESTED BY:

3. CONFIRMATION

I....., CONFIRM THAT THE ABOVE TEMPORARY WORKS HAVE BEEN INSPECTED AND THAT THE FOLLOWING ACTIVITY MAY/MAY NOT PROCEED. (PLEASE REFER TO DETAILS BELOW.)

SIGNED

POSITION DATE:

4. COMMEMTS/DETAILS

2.4 Case Example 2-4

1) Outline

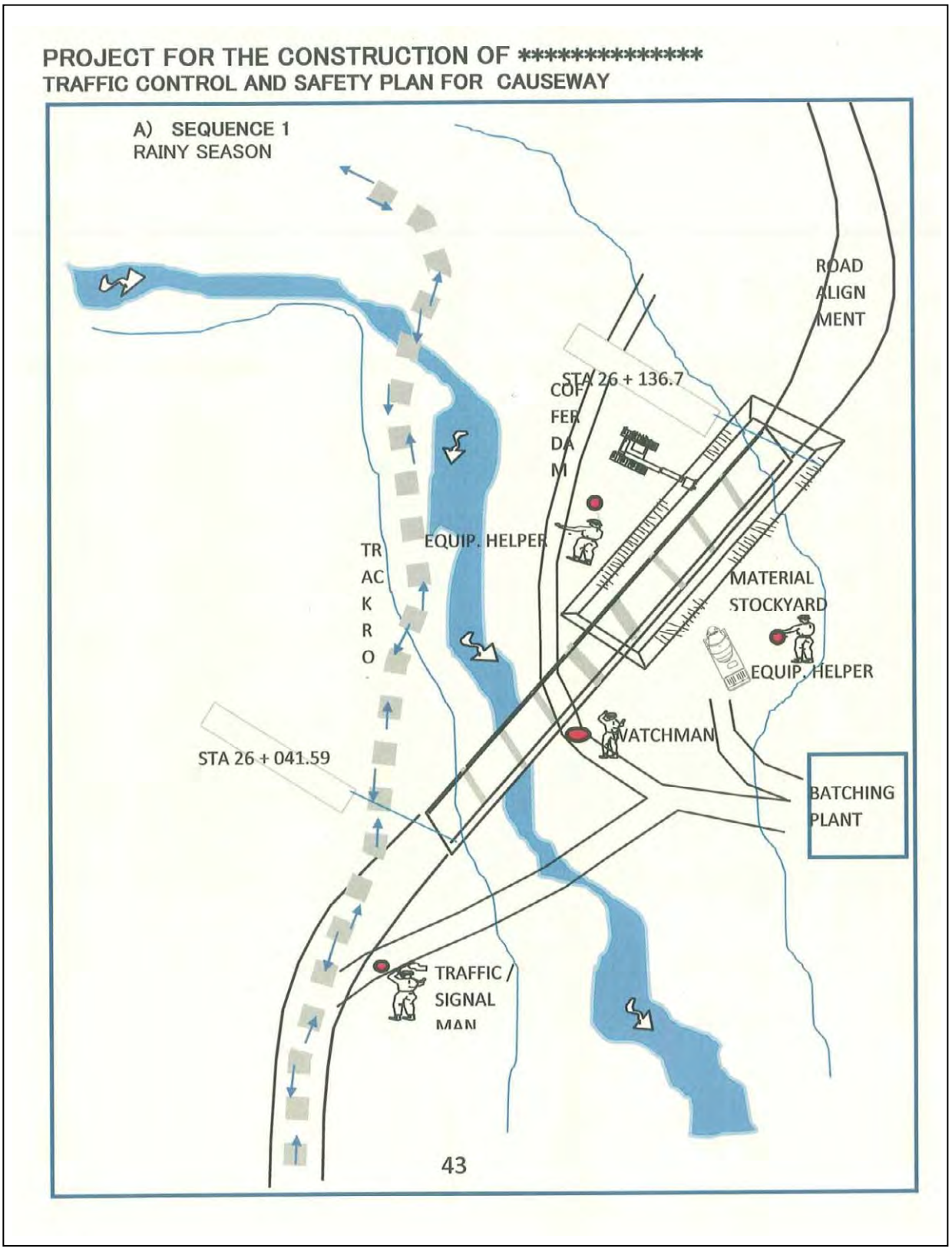
These are illustrations (for operations of soil extraction, slope cutting, masonry work, spraying, retaining walls installation, pavement, placing grid concrete and culverts installation etc.), which visually explain traffic control and safety plan for the site. As the sample is a road construction under severe geological features and weather condition, which leads to a higher possibility of landslides, this document is an outcome of efforts for safety assurance of the project.

One of well-devised points of Case Example 2-4-1 is that the alignment of causeway is changed in rainy and in dry seasons. Case Example 2-4-2 is an easy to understand illustration which depicts expected danger of shotcrete which involves a number of construction machinery. In addition, accidents caused by a third party are common during construction, excavation and banking on current roads. Case Example 2-4-3 thoroughly expresses method of construction and traffic safety measures as well as arrangement of construction machinery in both a ground plan-map and a longitudinal plan-map (Case Example 2-4-3).

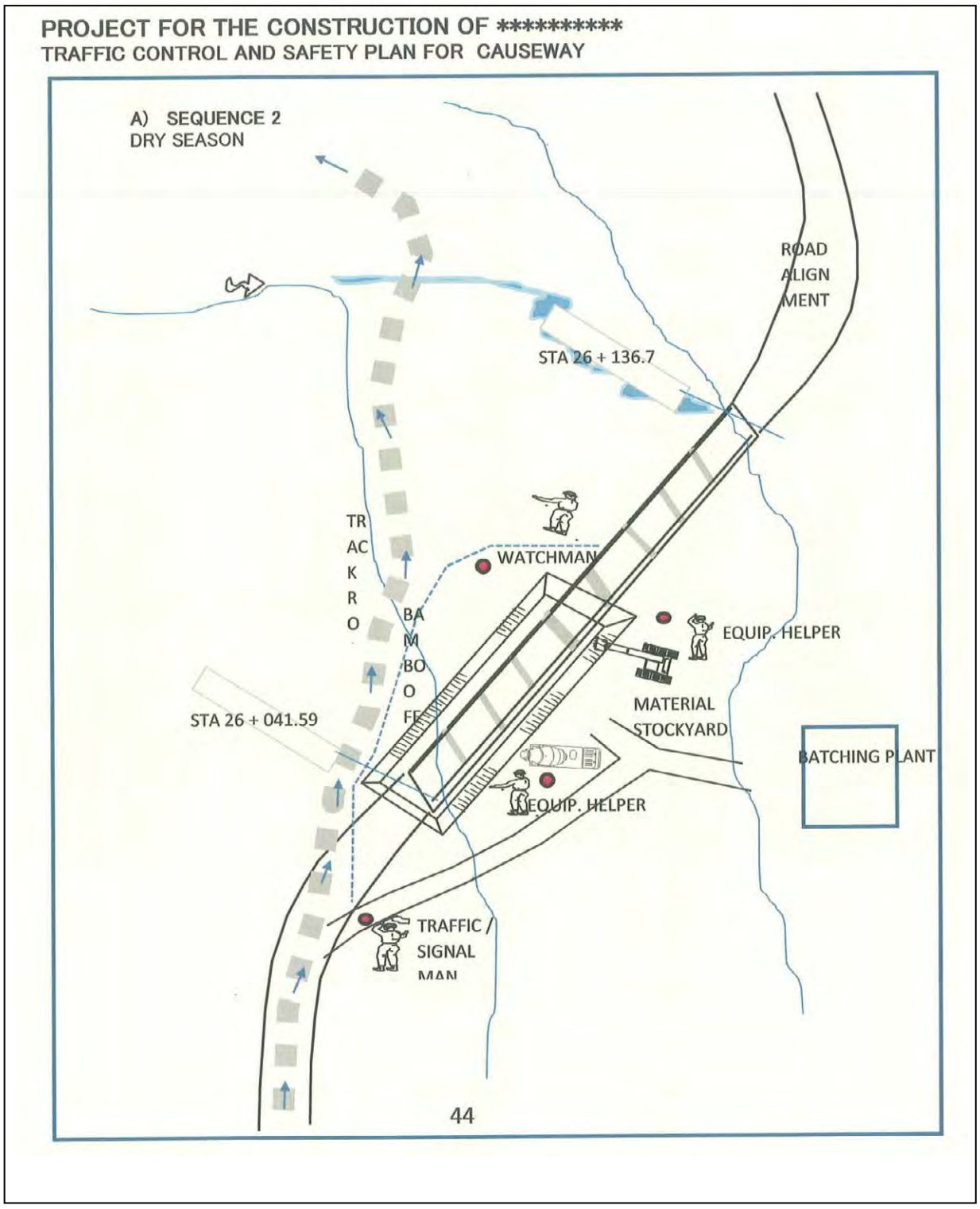
2) Case Example

The Case Examples 2-4-1, 2-4-2 and 2-4-3 are on the following pages.

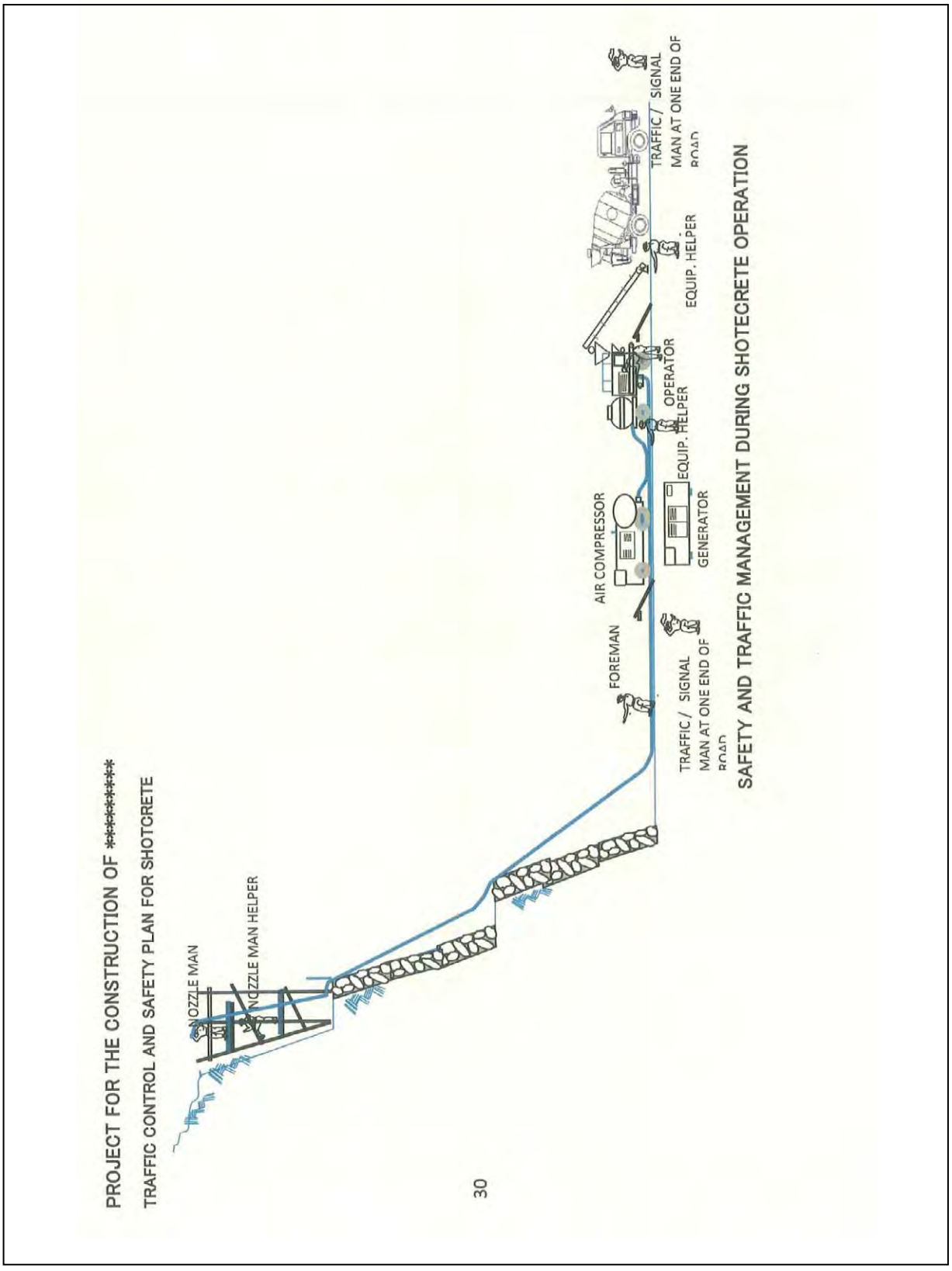
Operating Instructions	Case Example 2-4-1 ①



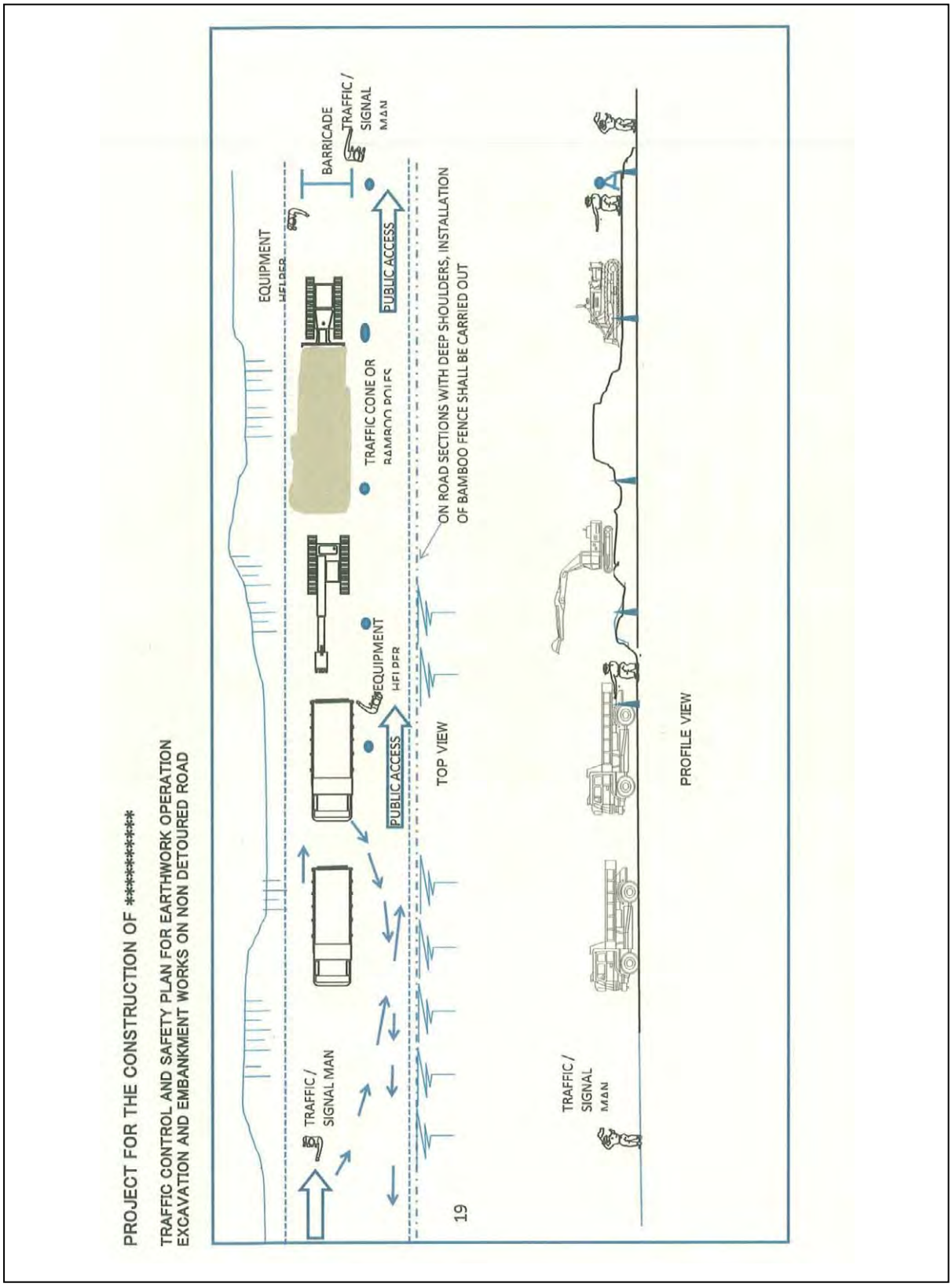
Operating Instructions	Case Example 2-4-1 ②



Operating Instructions	Case Example 2-4-2



Operating Instructions	Case Example 2-4-3



2.5 Case Example 2-5

1) Outline

Having already mentioned that newly-employed construction workers are more likely to encounter accidents, this document (Case Example 2-5-1) is a questionnaire for them, which intends to raise safety awareness. A newly-employed construction worker is requested to fill in ID number, company's name, qualifications and licenses obtained, contact address in emergency case, etc. and sign an oath of safety cooperation such as attending entry education course and wearing PPE etc.

Moreover, Case Example 2-5-2 is a notification form of dangerous material and harmful substances to use, which includes person in charge of handling of hazardous materials, names of hazardous materials, purposes of use, places of use, places of custody, period of use and ventilation. By signing these documents themselves, it is expected that new construction workers will be more aware for securing safety.

2) Case Example

The Case Examples 2-5-1 and 2-5-2 are on the following pages.

Operating Instructions	Case Example 2-5-1

	DATE of new Entry	No.
	Year month day	

① This questionnaire is used as basic material of where to make contact confirmation when the emergency such as the injuries is generated and main contractor's management for safety and sanitations. ②Main contractor's person in keeping properly manages and keeps ut.

Project ID				—				Explanatory Notes	

The person in question fills it in without fail

	First subcontractor company's name	Affiliated company's name
Company name		

First Name	Given Name	Occupation	Years of experience	Date of birth	Age
Alphabet	Alphabet		years	/ /	

address		TEL	・ ・

Contact in emergency case			
address			
TEL		Name	Relationship

Your qualification and license

Qualification and license name	Acquired year	Qualification and license number

Make an oath

I attended the new entry education of this project according to the attached instruction material, I swear to work safety by observing the rule of the this project (Especially, I wear the helmet, the safety shoes, and the reflection vest without fail.), and cooperating each other.

date	year month day	Signature	

(opinion)	Project Manager	Deputy Project Manager			Person in Charge

Operating Instructions	Case Example 2-5-2

No.6

Sign	

(Day) (Month) (Year)

Notification of pit dangerous material and harmful matter to use

Project office name _____

Project manager name _____

Company name (Subcontractor) _____

Person in charge _____ Sign

description

	Name of Material	Specification	Quantity	Description	
Material					
Purpose and using location					
Stock location					
Period of service	(Day) (Month) (Year) to (Day) (Month) (Year)				
Person in charge					
Control dangerous materials the person in charge					
Ventilation a way and classify					
Remarks					

(Note)

1 This dangerous material is diesel oil, lamp oil, propane gas, acetylene gas.

2 This harmful matter is organic solvent, specified chemical substance (using coating and waterproof).

2.6 Case Example 2-6

1) Outline

While there are quite many checklists on safety patrol, checklists on safety instructions such as this Case Example 2-6 is rare and thus valuable. Case Example 2-6 is a very stringent checklist which consists of description and drawing of safety problems, delay from limited date, reasons of delay, instructions for improvement, and limit for improvement date etc.

2) Case Example

The Case Example 2-6 is on the following page.

Operating Instructions	Case Example 2-6

FR: SIR-01

Appendix 9

SAFETY INSTRUCTION REPORT

Project Name			
Date	Date	Month	Year

Place	
Subcontractor's Name	
Ditto incharged Person's Name	
Safety Problem with Easy Drawing	

Reported by	
Work kind	
In charged Person's Name	
Instruction for Improvement	

Time Limit for Improvement Date				
Actual Improved Date				
Delay from Limited Date				
Reason of Delay				
Penalty of Delay				

Confirmation when Instructed			
Project Manager	Safety Officer	Safety Assistant	In charged Engineer	Subcontractor in charged Person

Confirmation when Completed				
Project Manager	Safety Officer	Safety Assistant	In charged Engineer	Subcontractor In charged Person

3 Record of Meetings

3.1 Case Example 3-1

1) Outline

This document is similar to a daily report format. Each worker of working groups should fill in the plan and the actual result of the daily work so that a comparison between the plan and the actual work done is clearly shown. Additionally, a number of construction machinery and its types should also be added. Attached is a ground map of work site, on which workers mark the sections they have worked. Moreover, instructions on safety, quality and environment and other notes can be added to the last column. If construction workers change day to day, the comparison between the plan and the result may be unclear.

2) Case Example

The Case Example 3-1 is on the following page.

Record of Meeting	Case Example 3-1

Daily Construction Meeting Record

( )

Brack:Plan, Red:Actual

Working date y m d week

weather (clear ・cloudy ・rainy ・with intermittent rain)

temperature ℃ wind speed m/s

(meeting date) Y M D Week hour)

Project Manager	Deputy Project Maneger				

Site map (Please fill in the position of the Gang.)

Gang's name	Location	Description of works	Parson in charge	worker Plan						worker Actual						Use major machine materials, etc.,			Safety, quality, environmental instruction, and notes	note
			Name	FM	SW	OP	DR	CW		FM	SW	OP	DR	CW		Item	Qty	Item		

5 daily meeting recos

Signature

4 Weekly & Monthly Report

4.1 Case Example 4-1

1) Outline

This case example is a simple and basic monthly report format, which includes total manpower, a number of safety meetings organized at site, a number of occupational safety awareness programs conducted at site, a number of fatal accidents, a number of other accidents and total working hours spent etc. There are two columns for each item, one for total number of the month, another for cumulative total number. It is also possible to add comments on the format. However, when considering safety management on an individual basis, there is a need to look at other documents such as patrol checklists.

2) Case Example

The Case Example 4-1 is on the following page.

Monthly Report	Case Example 4-1

MONTHLY SAFETY REPORT

Actual Work start Date: **For the Month of:**

Project: _____ **Report No:**

Name of the sub-Contractor: **Status as on:**

Name of work: _____ **Name of Designated Safety Officer:**

ITEM	THIS MONTH	CUMULATIVE
Total Strength (Staff + Workmen)		
No of Safety Meetings organized at site		
No of HSE awareness programs conducted at site		
Whether Workmen health Policy taken		
Whether Workmen health Policy is valid		
Whether workmen registered under		
Number of Fatal accidents		
Number of Reportable Accidents (Non Fatal)		
Other accidents (Non Reportable)		
Total no of Accidents		
Total Man Hrs worked		

_____ _____

_____

_____

Incidence Rate _____

No of Fire Incidents _____

No of First Aid Cases _____

No of Near Miss Incidents _____

Compensation Cases _____

_____

No of Violations of Health and Safety provisions _____

Remarks, if any

Date:

Safety Officer

(Signature and Name)

4.2 Case Example 4-2

1) Outline

This case example is a weekly and monthly report format regarding safety management, which consists of name of item, location, inspection result, date of action and signature (Case Example 4-2-1). It can be said that this format is more systematized than the earlier Case Example 4-2-1 as it allows the inspectors to check whether any action of countermeasures are taken on the same page. Case Example 4-2-2 is a weekly safety check sheet, thus there are less items to check. Moreover, Case Example 4-2-3 is a record of issuance of PPE in which types of PPE, name of the worker and his/her signature are to be filled. It is easy to grasp a general view.

2) Case Example

The Case Examples 4-2-1, 4-2-2 and 4-2-3 are on the following pages.

Weekly & Monthly Report	Case Example 4-2-1 ①

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

FORM S1 **Report No:**

Weekly/Monthly Safety Inspection Report

Inspection Area		SAFETY FIRST
Date		
Participants		

SITE LOCATION CODES

ITEM	DESCRIPTION	LOCATION	VIOLATION / OBSERVATION	ACTION BY DATE	DATE ACTIONED & SIGN
1.0			GENERAL SITE CONDITION		
1.1	Housekeeping		☐ Satisfactory ☐ Projecting Nail ☐ Debris & Scraps ☐ N/A or Others, please specify		
1.2	Access & Egress		☐ Satisfactory ☐ Blocked ☐ Not Provided ☐ Corrective safety measures to be taken		
1.3	First-Aid Box		☐ Satisfactory ☐ Insufficient Medical Items ☐ No list of qualified First-Aid Personnel ☐ No "First-Aid" Mark ☐ Not Provided .		
1.4	Fire Extinguisher		☐ Satisfactory ☐ Maintenance Period Expired ☐ Improper Hanging ☐ Not Provided ☐ N/A Others, please specify:		
1.5	Safety Representative Weekly Report		☐ Satisfactory ☐ Not Yet Completed ☐ N/A or others, please specify		
1.6	Notice of Empl. Of Safety Officer Safety Supervisor		☐ Satisfactory ☐ Satisfactory ☐ Not Posted ☐ Not Posted ☐ Others please specify ☐ Others please specify		
1.7	Dangerous Goods		☐ Satisfactory ☐ Not Labeled ☐ Improper Storage ☐ N/A or others, please specify		
2.0			LIFTING APPLIANCE & LIFTING GEAR		
2.1	Mobile Crane		☐ Satisfactory ☐ No Weekly Inspection Report ☐ No SWL clearly posted ☐ No Statutory Test & Thorough Examination Certificates ☐ Use of outriggers ☐ Capacity & Lifting Radius Chart ☐ Use of Signalman ☐ Unauthorized riding of crane ☐ Riding Loads or Hook ☐ Operation Near Overhead Power Lines ☐ Remote Control Status/Battery ☐ Communication Device ☐ Lifting Capacity Warning (Bell) ☐ Travel Warning Device ☐ Broken/Fatigue Failure Wires ☐ N/A or Other, please specify		
2.2	Lifting Gear		☐ Satisfactory ☐ No SWL mark or stamp ☐ Broken Wires ☐ No Marking ☐ No Statutory Test Certificates ☐ No Statutory Examination Report ☐ N/A or others, please specify		

Weekly & Monthly Report	Case Example 4-2-1 ②

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

ITEM	DESCRIPTION	LOC	VIOLATION / OBSERVATION REMARKS	ACTION BY DATE	DATE ACTIONE D & SIGN
4.0			PLANT & EQUIPMENT		
4.1	Winch or Lift		☐ Satisfactory ☐ Communication Device Defective/Malfunction ☐ No Statutory Test & Thorough Examination Certificates ☐ No Weekly Inspection Report ☐ No SWL & Max. Person Notice ☐ N/A or Others, please specify		
4.2	Woodworking Machine		☐ Satisfactory ☐ No Safety Guards ☐ N/A or Others, please specify		
4.3	Abrasive Wheel		☐ Satisfactory ☐ No Safety Guards ☐ No Warning Notice ☐ N/A or Others, Please specify		
4.4	Arc Welding Machine		☐ Satisfactory ☐ No Earthling ☐ Out Going Cables w/ o Protection ☐ Live Parts Not Insulated ☐ Unsatisfactory. ☐ N/A or Others, please specify		
4.5	Oxy-Acetylene Cutting		☐ Satisfactory ☐ No Flashback Arrestors ☐ Not Labeled (Acetylene) ☐ Not Kept Upright ☐ PPE Not in use. ☐ N/A or others please specify		
5.0			TEMPORARY ELECTRICAL INSTALLATION		
5.1	Distribution Board & Switch		☐ Satisfactory ☐ No ELCB ☐ Unlocked ☐ No Warning Sign ☐ Proper earthing ☐ N/A or Others, Please specify		
5.2	Outgoing Wiring, Plug & Socket		☐ No Protection Against Physical Damage ☐ Satisfactory ☐ No insulation ☐ No Earthing ☐ No Protection Against Physical Damage		
5.3	Portable Lighting		☐ Satisfactory ☐ No earthling ☐ Damaged Bulb/Cover ☐ N/A or Others, please specify		
5.4	Lightning Conductors		☐ Satisfactory ☐ Properly Grounded ☐ N/A or Others, please specify		
6.0			WORK AT HEIGHT		
6.1	Scaffolding		☐ Satisfactory ☐ No Monthly Inspection Report ☐ Inadequate Bracing ☐ Damaged Scaffolds ☐ No Base-Plate ☐ Damage Scaffolds ☐ N/A or others, please specify		
6.2	Working Platform (Fixed/Mobile)		☐ Satisfactory ☐ Damaged Scaffolds ☐ No Access ☐ Wheel Unlocked At Work ☐ No Guard rails/toe board ☐ Not Closely Boarded ☐ No Monthly Inspection Report ☐ N/A or Others, please specify		

Weekly & Monthly Report	Case Example 4-2-1 ③

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

ITEM	DESCRIPTION	LOC	VIOLATION / OBSERVATION REMARKS	ACTION BY DATE	DATE ACTIONED & SIGN
6.3	Ladder		☐ Satisfactory ☐ Not Secured Its Top & Bottom ☐ Damaged Rungs ☐ Not Extended 1m At the Landing ☐ Unsatisfactory ☐ N/A or Other, please specify		
7.0	WORK PERMIT SYSTEM				
7.1	Gas Testing Report		☐ Satisfactory ☐ No yet completed/updated ☐ So far not introduced ☐ N/A or Others, please specify		
7.2	Communication System/Device		☐ Satisfactory ☐ Not Provided ☐ Defective/Malfunction ☐ N/A or Others, please specify		
8.0	PERSONAL PROTECTIVE EQUIPMENT & Employee Practices				
8.1	General Safety Gear		☐ Satisfactory ☐ No Safety Helmet ☐ Safety jacket ☐ No Safety Shoes ☐ No Eye Protector ☐ No Ear Protector ☐ No Safety Belt ☐ No Dust Mask/Respirator ☐ Unsatisfactory		
8.2	Employee Practice		☐ Reporting Injuries ☐ Reporting Damage ☐ Housekeeping ☐ Personal Protective Equipment ☐ Personal Protective Devices ☐ Drunkenness ☐ Horseplay ☐ Unauthorized Operation ☐ Unsafe Fueling Equipment ☐ Unsafe Erection of Scaffold ☐ Unsafe use of Ladders ☐ Unsafe Lifting ☐ Using Broken tools ☐ Using Unsafe Welding Cable ☐ Using Unsafe Power Tools ☐ Unsafe use of Gas Bottles ☐ Ridding with loads in truck ☐ Under Suspended load ☐ Unsafe Riding of Equipment ☐ Open fires ☐ Failure to bend/remove nails ☐ Unauthorized entry		
9.0	DANGEROUS GOODS HANDLING				
9.1	Explosives		☐ Satisfactory ☐ Wooden storage boxes ☐ Detonators ☐ Explosives ☐ Stock book maintained, order and delivery records ☐ Warning labels, "Danger- Detonators" In Eng. + Singhalese ☐ Blasting permit ☐ Transporting of Explosives. ☐ Fitness of the vehicle ☐ Authorized shot firer ☐ Register of blasting operations ☐ N/A or others, please specify		
9.2	Compressed gas		☐ Satisfactory ☐ Designated storage area and proper use of storage ☐ Security of storage area ☐ Labeling ☐ Warning signs ☐ Not Securing gas bottles (up-right) ☐ N/a OR others, please specify		

Weekly & Monthly Report	Case Example 4-2-1 ④

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

ITEM	DESCRIPTION	LOC	VIOLATION / OBSERVATION REMARKS	ACTION BY DATE	DATE ACTIONE D & SIGN
9.3	Corrosive substances		☐ Satisfactory ☐ Warning markings, handling requirements ☐ Satisfactory packing ☐ Absorbent near-by ☐ Ventilation		
9.4	Others		☐ Poisonous substances ☐ Inflammables		
10.0	AIR POLLUTION				
10.1	Generators	1. 2. 3. 4.	☐ Satisfactory ☐ Black smoke ☐ Leaking Oil ☐ Others, Please specify		
10.2	Earth moving equipment	1. 2. 3 4	☐ Satisfactory ☐ Black smoke ☐ Leaking oil ☐ N/A or others, please specify		
10.3	Vehicles, locomotives, other fuel burning engines	1. 2. 3. 4.	☐ Satisfactory ☐ Black smoke ☐ Leaking oil ☐ N/A or others, please specify		
10.4	Dust	1. 2. 3. 4.	☐ Satisfactory ☐ Site dusty ☐ Inadequate spraying ☐ N/A or others, please specify		
11.0	WATER POLLUTION				
11.1	General house-cleaning		☐ Oil/diesel stains on ground ☐ Garbage scattered all over the site. ☐ N/A or others, please specify		
11.2	Maintenance of de-silting tank	1. 2. 3.	☐ Odors ☐ Oil sheen/Visible grease ☐ Turbidity ☐ Foam ☐ Colour ☐ Tank full of silt ☐ N/A or others, please specify		
11.3	Neutralization Tank	1. 2.	☐ Odors ☐ Oil sheen/Visible grease ☐ Turbidity ☐ Foam ☐ Colour ☐ Tank full of silt ☐ No neutralization record ☐ No monitoring of waste water pH ☐ Containment of acid storage area ☐ N/A or others, please specify		
11.4	Floor drains		☐ Signs of pouring oil/diesel into drains ☐ Contaminated with chemicals (e.g. oil, diesel etc.,) ☐ Blocked by debris/garbage ☐ Storage of chemicals nearby ☐ N/A or others, please specify		
12	EARTH POLLUTION				
12.1	Using earthmoving equipment and chemicals		☐ Oils spills on the ground ☐ Chemical spills ☐ Dumping waste concrete ☐ Used Batteries ☐ Plastics bags etc., ☐ Dumping tires ☐ Glasses ☐ N/A or others specify		
13	HAZARDOUS MATERIAL HANDLING AND STORAGE				
13.1	Waste/garbage bins		☐ Satisfactory ☐ Pollutants (e.g. waste chemical containers, rags, and batteries etc., dumped in bins. ☐ Recyclables (e.g. metal) dumped in garbage bins ☐ N/A or others, please specify		

Weekly & Monthly Report	Case Example 4-2-1 ⑤

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

ITEM	DESCRIPTION	LOC	VIOLATION / OBSERVATION REMARKS	ACTION BY DATE	DATE ACTIONE D & SIGN
13.2	**Chemical dispensing**		☐ Drums/containers not effectively closed ☐ No drip pans/trays ☐ Extensive spillage on floor/ground ☐ Waste chemical on the external surface of the containers ☐ No grounding of drums ☐ No Warning signs ☐ No overhead covering/protection from rainwater flooding ☐ Spilled chemicals in drip tray not pumped out ☐ No Emergency equipment ☐ Funnels not used. ☐ N/A or others, please specify ☐ Interaction with water ☐ Strong supporter of combustion ☐ Readily combustible ☐ Liable to spontaneous combustion ☐ Others		
13.3	**Waste types**		☐ Drums/containers not effectively closed. ☐ Not stored in designated drums ☐ No drip pans/trays ☐ Extensive spillage on floor/ground ☐ Waste chemicals on the external surface of the containers ☐ No labels on drums ☐ No, or ineffective, bonding ☐ No warning signs ☐ No overhead covering ☐ No ventilation ☐ No emergency equipment ☐ Funnels not used ☐ Maximum volume not posted or maximum volume exceeded ☐ N/A or others, please specify.		
13.4	**Cleaning solvents**	Metal works Hop	☐ No designated storage drums ☐ Drums/containers not effectively closed. ☐ No drip pans/trays ☐ Extensive oil/diesel spillage on ground ☐ Soaking tray placed in heavy traffic area ☐ No emergency equipment ☐ Funnels not used ☐ N/A or others, please specify		
13.5	**Chemical storage**		☐ No, or ineffective, bonding ☐ Drums/containers not effectively closed. ☐ No drip pans/ trays ☐ Extensive oil/diesel spillage on ground ☐ Waste chemical on the external surface of the containers ☐ No warning signs ☐ No overhead covering ☐ No ventilated ☐ No emergency equipment ☐ No maximum storage quantity posted, or quantity exceeded ☐ No inventory ☐ N/A or others, please specify		
13.6	**Above ground diesel tanks**		☐ Extensive diesel spillage on ground ☐ No bending /no drip pans when pumping diesel ☐ No drip buckets for dispensing hoses/pump ☐ Integrity of tank not satisfactory ☐ Leaking pipes/ connectors/ pumps ☐ Roof not provided ☐ Located too close to storm drain inlets ☐ Banding discharge valve not closed ☐ N/A or others, please specify.		
13.7	**Oil change**		☐ No drip pans / spills / stains / housekeeping ☐ Waste oil not poured into designated waste oil drums ☐ Dirty oil filters dumped into garbage ☐ N/A or others, please specify		

Weekly & Monthly Report	Case Example 4-2-1 ⑥

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

ITEM	DESCRIPTION	LOC	VIOLATION / OBSERVATION REMARKS	ACTION BY DATE	DATE ACTIONED & SIGN
14	WASTE MANAGEMENT				
14.1	Waste types		☐ Chemical ☐ Toxic ☐ Flammable ☐ Corrosive ☐ Radioactive ☐ Construction/ work ☐ N/A or others, please specify		
14.2	Storage Containers		☐ Container Integrity not satisfactory ☐ No labeling ☐ Drums/ containers not effectively closed ☐ Waste chemical on the external surface of the containers ☐ Handling Instructions not posted at dispenser. ☐ N/A or others, please specify		
14.3	Housekeeping		☐ Satisfactory ☐ Miscellaneous items are stored here ☐ Improper stacking of drums ☐ Isle too narrow or not cleared of obstacles ☐ N/A or other, please specify		
14.4	Records		☐ No inventory records ☐ No shipment manifests ☐ N/A or others, please specify		
14.5	Storage containers		☐ Satisfactory ☐ Container integrity not satisfactory ☐ No labeling - ☐ Drums/containers not effectively closed ☐ Waste chemical on the external surface of the containers ☐ Handling instructions not posted at dispenser		
14.6	House keeping		☐ Satisfactory ☐ Miscellaneous items are stored here ☐ Improper stacking of drums ☐ Isle too narrow or not cleared of obstacles ☐ Inadequate bounding volume ☐ Inadequate ventilation ☐ Directly connected to drains ☐ Inadequate space for handling waste containers ☐ Not provided with a roof ☐ Not secured by lock(s) ☐ No warming signs/maximum quantity or volume ☐ No emergency equipment ☐ N/A or others, please specify		
14.7	Storage area		☐ Satisfactory ☐ Non-Government approved waste remover ☐ Non-Government approved treatment facility ☐ No shipment manifests ☐ N/A or others, please specify		

SUMMARY NOTES		Action to be taken by
14.8	Construction Activities	

Weekly & Monthly Report	Case Example 4-2-2 ①

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

FORM S13 **Report No: .....**

WEEKLY SAFETY CHECK SHEET

Date:	Location:	Officer In charge:	
Sub Contractor:		From	To
Officer In charge			

	Safety Boards (Working in the Public Roads/Places)	**Sun**	**Mo**	**Tue**	**We**	**Thu**	**Fri**	**Sa**
1	Sign Boards required according to the work Site							
2	Flag men with Traffic Jackets							
3	Safety Cones (sufficient number for the site)							
4	Barricade Tape							

Working Under the Bridges & Elevated Stages/ Safety Precautions

1	Safety Nets							
2	Standing Rebar Edge Protection							
3	Wooden. Gangway							
4	Guardrails							
5	Foot Bridges							
6	Walk Ways							
7	Safety Belts							
8	Safety Helmets /Chin Guard Tightened							
9	Safety Shoes/ Boots							
10	Safety of Ladders							
11	Tools & Equipments are in Good Condition							

Excavation Sites/ Collapsible Areas

1	Mechanical Condition of Excavator/JCB							
2	Underground Obstructions (Water pipe, Telecom Cables)							
3	Electricity Cables & Telecom Cables above the site							
4	Condition of Soil is Collapsible							
5	Timber pile sheets are available for Shoring							
6	Steel Sheet Piles are available for Shoring							
7	Jacks & Supports							
8	No third party shall enter in to the site							
9	First aid officer is in the site							

Safety Precaution for Night Works

1	Generators							
2	Lights 1000W / 500W							
3	Blinking Lights/Warning Lights							
4	Safety Boards							
5	Flag Men / Signal Men to Control the Traffic							
6	Permission from Relevant Authority							
7	Inform to Environment Before Commencing Work							
8	Inform to Police							

Weekly & Monthly Report	Case Example 4-2-2 ②

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

1	Check Welding Equipment is in Good Working Order							
2	Fire Extinguishers are Available							
3	Check Flammable Liquids or Aerosol Cans are around							
4	"NO SMOKING" Sign Boards							
5	Do not let anybody to watch the Arc of an Arc Welder in Operation							
6	Check Acetylene Regulator Pressures it should never be allowed To exceed 103kp							

Check Proper Protective Clothing and Equipments

1	Leather Gloves							
2	Long Sleeve Shirts or Hand Protector							
3	Eye and Face Protector Shield							
4	Goggles							
5	Helmet or Hard Hat							
6	Safety boot or shoe							

Discharge of Excess Soil

1	Is the Land Approved by the Relevant Authority?							
2	House Keeping							
3	Fire Extinguisher							
4	Traffic Control							
5	First Aid							
6	Blasting Communication							
7	Explosive Handling							
8	Unsafe Machineries & Vehicles							
9	Working under the influence of Alcohol							
10	Other Unsafe Activities (Specify)							

Special Comments:

.....
.....
.....
.....
.....
.....

Safety Officer	Sub Contractor's Officer In charge: Name: Designation: Signature: Sub Contractor.....

Comments:

Project Manager

.....

Weekly & Monthly Report	Case Example 4-2-3

PROJECT NAME

PROJECT HEALTH & SAFETY PLAN

FORM S10 **Report No: ......**

RECORDS OF ISSUANCE OF PERSONAL PROTECTIVE EQUIPMENT

Main Contractor: ______________________________

Record by : ______________________________

NAME	EMPL NO	HARD HAT	SHOES BOOTS	SAFETY GLOVES	RAIN COAT	SAFETY GOGGLES	SIGNATURE

4.3 Case Example 4-3

1) Outline

This is a monthly safety report. It is a simple meeting record format for monthly meetings organized by Safety Management Committee. In the format, major events, casualty reports and safety activities (meetings and safety trainings) are to be reported.

2) Case Example

The Case Example 4-3 is on the following page.

Monthly Report	Case Example 4-3

		Date of Preparation	
		Prepared by	
		Approved by	

MONTHLY SAFETY REPORT

1. Major Event

2. Casualty Report

No.	Description				Subcontractor		Total	
1	Number of person		This Month	Cumulative	This Month	Cumulative	This Month	Cumulative
2	Man hours worked	H						
3	No lost time accident	b						
4	Loss time accident <3days and less	c						
5	Loss time accident >4days and more	d						
6	Fatal accident	e						
7	Man days lost	L						
8	Frequency rate	F						
9	Severity rate	G						

Note: F=((d+e)/H)×1,000,000 G=(L/H)×1,000

3. Safety Activity

3.1 Safety Meeting

No.	Description	This Month			Remarks
		Date	No. of attendees	Hours of Meeting	
1	General Safety Meeting for Workers				
2	Monthly Progress Meeting				
3	Weekly Meeting				

3.2 Safety Training

No.	Description	This Month			Remarks
1	Safety orientation to new worker	Date	No. of attendees	Hours of Meeting	
2	Tool box meeting				
3	Specific safety training				
	a)Traffic Accident				
	b)Discuss accident happen from other project				
	c)Safety Motivation for workers prior to safety promotion				
	d)Others				

5 Site Inspection Check Sheet

5.1 Case Example 5-1

1) Outline

Case Example 5-1-1 is a daily checklist for cranes. The inspection items are for engine, hydraulic system, brake system, driving system, electronic system, and safety devices. Case Example 5-1-2 is scaffold inspection list, which consists of location & description of scaffold, dates & result of inspection and a short checklist for inspection (including baseplates, ground condition, joint condition, bracing, platform, ladder, and guard rail etc.).

2) Case Example

The Case Examples 5-1-1 and 5-1-2 are on the following pages.

Inspection by Patrol	Case Example 5-1-1

CRANE DAILY CHECKLIST – PF 95

WORKS SECTION/LOCATION DATE:
WEIP/PKG___/___
REF:

EQUIPMENT/PLANT MACHINERY NUMBER	CHECKED BY NAME	DESIGNATION	SIGNATURE

No.	ITEM	CHECK DONE & DATE								COMMENTS
1	ENGINE									
	WATER LEVEL									
	OIL LEVEL & CONDITION									
2	HYDRAULIC SYSTEM									
	HYDRAULIC OIL & CONDITION									
	HYDRAULIC PUMP, MOTORS & CYLINDERS									
	CONTROL VALVE, ROTATING JOINT									
3	BRAKING SYSTEM									
	SWING BRAKE CONDITION									
	BOOM HOIST BRAKE CONDITION									
	BRKE FLUID AND CONDITION									
4	TRAVELLING SYSTEM									
	TRACK AND CRAWLER ROLLERS									
5	ELECTRICAL SYSTEM									
	FLUID LEVEL IN BATTERY									
	ELECTRICAL DISPLAY PANEL									
6	SAFETY DEVICES									
	BOOM OVER HOIST									
	OVERLOAD ALARM IF ANY									

KEY: X: NOT ACCEPTABLE – REPAIRS TO BE DONE, CRANE NOTO TO BE USED
: ACCEPTABLE
N/A NOT APPLICABLE TO THE CRANE

Inspection by Patrol	Case Example 5-1-2

PROJECT NAME

PROCEDURE NO.16 – SAFETY MANAGEMENT

SCAFFOLD INSPECTION LIST – PF52	
WORKS SECTION/LOCATION: WEIP/PKG____/_____ REF:	DATE

1. WORK COMMENCEMENT – DATE

LOCATION AND DESCRIPTION OF SCAFFOLD	DATE OF INSPECTION	RESULT OF INSPECTION STATE WHETHER IN GOOD ORDER OR NOT	ADDITIONALNOTES	SIGNATURE OF PEERSON WHO CARRIED OUR INSPECTION

2. SHORT CHECK LIST – THIS CHECKLIST MUST BE ATTACHED TO THE SCAFFOLDING BEING INSPECTED AND CERTIFIED AS SAFE OR NOT SAFE TO USE.

BASEPLATES	ACCEPTABLE(Y/N)
GROUND CONDITION	
STANDARDS	ACCEPTABLE(Y/N)
JOINT CONNECTION	
SPACING	
BRACING	

ACCESS	ACCEPTABLE(Y/N)
PROVIDED	
PLATFORM	
LADDER	
GUARD RAIL	
TOE BOARD	
COUPLINGS	ACCEPTABLE(Y/N)

OTHER MEMBERS	ACCEPTABLE(Y/N)

SIGNATURE: _____ NAME: _____ DATE_____/_____/_____

5.2 Case Example 5-2

1) Outline

In order to thoroughly manage safety at construction site overseas, a safety inspection checklist which is a basic format of safety management system based on the head office's basic principles is prepared by the head office of contractors. Workers at construction sites are requested to select and use applicable items depending on the characteristics of work and conditions. Case Example 5-2 is a checklist prepared for common type of construction which includes items of inspection such as PPE, excavation, scaffold timbering, cleaning, dismantling, traffic safety, crane, and electricity etc. In addition, there are other specific formats for construction which deals with concrete casting, construction which involves electrical work or welding.

2) Case Example

The Case Example 5-2 is on the following page.

Inspection by Patrol	Case Example 5-2 ①

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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SAFETY INSPECTION

1 PURPOSE

To identify hazardous situations and to implement remedial action before things can develop to a point where injury or other losses can occur.

2 SCOPE

Applicable to all project operations identified as hazards.

3 REFERENCE

SP-01_EHS	Aspects and Hazards analysis
OCP-08_OHS	Maintenance of Machinery

4 RECORDS

Relevant safety inspection records such as;
Scaffold inspection checklist, equipment inspection checklist, General safe work checklist, etc.

5 PROCEDURE

5.1 **Responsibility**

5.1.1 Operators are to carry out inspection of equipments or plants before work.

5.1.2 M&E engineer is to carry out periodical inspections for M&E equipments and plants.

5.1.3 Site Supervisor or foreman are to carry out site work inspections and safety reports periodically.

5.1.4 Safety officer and his assistants are to carry out site work inspections and safety reports periodically.

5.1.5 The Project Manager or his representative and Construction Managers are to carry out safety inspections monthly.

5.2 **General**

5.2.1 In addition to the safety maintenance and equipment-inspection program,

Inspection by Patrol	Case Example 5-2 ②

which is an essential operating practice on every site, regular inspection of the workplace must take place.(refer to OCP-08_OHS Maintenance of Machinery)

5.2.2 All inspections, regardless of type, shall be taken place at intervals, as dictated by need.

5.2.3 Middle and senior management shall involve themselves in these inspections by taking part in nominated inspections or conducting their own.

5.3 **Safety Inspections**

5.3.1 Where required by contract, the Safety Officer shall on monthly basis prepare and submit the mandatory safety report to the client with endorsement of Project Manager.

5.3.2 The Safety Officer, Site Supervisor, designated personnel shall conduct various safety inspections with respective subcontractors/site personnel via various inspections checklists.

5.3.3 Further inspection program shall be developed to specify the check items, frequency, checklists, person in charge, etc.

5.3.4 Such program shall comprise but not limited to the followings;

- General safe work
- Scaffolding
- Temporary electrical installation
- Excavation
- Concreting and formwork
- Hot work
- Housekeeping, etc.

5.3.5 Appendix-1 shows the typical checklist for general safe work inspections.

5.3.6 The Safety Officer, Site Supervisor or designated personnel shall keep the inspection records.

5.4 **Remedial Action**

5.4.1 Inspections conducted are to be properly documented in order to specify the corrective actions required, timeframe and responsible person for the actions.

5.4.2 Follow-up is necessary to ensure that remedial works are completed on schedule as committed by the parties concerned.

Inspection by Patrol	Case Example 5-2 ③

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6 ATTACHMENT

Appendix 1 Sample for
safe work inspection checklist

Inspection by Patrol	Case Example 5-2 ④

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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Appendix 1 Sample for General Safe Work Inspection Checklist

OHS CHECKLIST FOR PROJECT SITE

NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
1	**Personal Protective Equipment**		
1a.	Use of Safety helmets.		
1b.	Provision and use of eye protection.		
1c.	Use of safety belt.		
1d.	Provision of ear protection.		
2	**Excavation**		
2a.	Excavation depth > 5m to provide warning sign.		
2b.	Timber plank used for piling at least 50mm thick.		
2c.	Excavation depth > 1.2m provide access ladder.		
2d.	Excavation depth > 4m to provide PE design for shoring.		
2e.	Excavation depth > 1.5m with mechanical digger used, to provide PE design for shoring.		
2f.	Positioning of machinery in dangerous manner.		
2g.	Storage of material 610mm away from the edge of trenches.		
2h.	Failure to protect open cut slope in accordance with approved method statement or design.		
3	**Scaffolding**		
3a.	No wire ties.		
3b.	Proper maintenance of scaffold.		
3c.	Minimum width of working platform is		

Inspection by Patrol	Case Example 5-2 ⑤

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
	635mm.		
3d.	Sign show maximum load & maximum no. of workers to be placed.		
3e.	Platform projection shall not be less than 50mm or greater than 4 times of thickness of plank used.		
3f.	Plank used shall be flushed and secured.		
3g.	Removal of construction debris from platform.		
3h.	Provision of access ladder to platform.		
3i.	Provision of guard rail for working platform exceeds 3m in height.		
3j.	Provision of bracing from top to base of scaffolding.		
3k.	Erection on solid foundation or well consolidated soil.		
4	**Housekeeping**		
4a.	Cause tripping and cutting hazards.		
4b.	Storage of material cause obstruction to passage way or place of work.		
4c.	Material to stored or stacked in safe manner.		
4d.	Material storage shall not cause danger to persons below or close to edge of platform.		
4e.	Debris shall not accumulated and constitute hazard.		
4f.	Provision of hoarding.		
4g.	Removal of oil, greese, water etc., in which may causes slipping hazard.		
5	**Demolition**		

Inspection by Patrol	Case Example 5-2 ⑥

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
5a.	Proper method of removal of debris.		
5b.	Provision of catch platform for demolition of exterior wall or roof from a point more than 12m height if persons below are exposed to falling objects.		
5c.	Erection of barricade to prevent unauthorised person(s) entering the demolition project site with warning sign display.		
5d.	Swinging weight method to provide 1.5 times height of structure demolition zone with barricade.		
5e.	Clamshell bucket used to maintain 8m demolition zone with barricade.		
6	**Traffic Control & Road Safety**		
6a.	Failure to provide alternative footpath and directional sign for pedestrians.		
6b.	Closing of any road or lanes leading to traffic jam of 100m or more.		
6c.	Failure to display any or adequate temporary sign, cone, rotating lamp or other indication for temporary road-lanes closure.		
6d.	Failure to maintain barricades, blinkers, rotating lamps in good working condition.		
6e.	Failure to display adequate warning sign at strategic location.		
6f.	Failure to provide barrication with suitable warning sign and light when works carry out near any roads / highways.		
6g.	Placing of equipment / machineries, debris, material or thing in such a manner as to cause obstruction to		

Inspection by Patrol	Case Example 5-2 ⑦

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
	persons using the public street and pedestrian footway.		
6h.	Failure to rectify road depression or potholes immediately.		
6i.	Failure to provide collision attenuator / truck mounted attenuator (TMA) for works on road with speed limit 70kph and above.		
7	**Cranes**		
7a.	Sound underlying material for footing.		
7b.	Provide capacity chart.		
7c.	Indicator for safe working load correspond to radius of jib and warning sign when radius is unsafe.		
7d.	No travel of crane with suspended load.		
7e.	Provision of lifting the Site Supervisor and signal man.		
8	**Electrical**		
8a.	Provision of proper warning sign in 4 official languages where electrical circuit exists.		
8b.	Protective measures taken to prevent damages.		
8c.	Wiring supported on proper insulator and not looped over rails or brackets.		
8d.	No wiring shall be left on ground or floor and shall be protected.		
9	**Safe Means of Access**		
9a.	Safe means of access to be provide to working levels above or below ground.		
9b.	Provision of hand hold to ladder.		
9c.	Ladder shall not stand on loose bricks or		

Inspection by Patrol	Case Example 5-2 ⑧

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
	loose packing.		
9d.	Ladder shall be securely fixed.		
9e.	No undue swaying of ladder.		
10	**Piling**		
10a.	Piling hammer shall be lowered to ground if is not in use.		
10b.	Provision of permanent ladders.		
10c.	Warning sign provided at 50m away from test pile area.		
10d.	Sound footing for advancing of pile driver.		
11	**Falling Hazard**		
11a.	Open side or opening shall be guarded or covered.		
12	**Prevention of Fire**		
12a.	Provision of fire extinguishers.		
13	**First-Aid**		
13a.	Provide and maintain First-Aid boxes.		
13b.	Employment of first aider for factory more than 25 persons.		
14	**Safe Place of Employment**		
14a.	All places of work, floors, steps, stairs, passages, gangways, must be properly maintained and free from obstruction.		
14b.	Secure foothold & handhold shall be provided if a person is liable to fall from more than 3m; provision of safety belt, fencing, net and secured anchorage.		
15	**Health Requirements**		
15a.	Cleanliness – Work place to be kept clean and free from effluents.		

Inspection by Patrol	Case Example 5-2 ⑨

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
15b.	Ventilation-Provision of ventilation for work place which generate harmful gases, vapours or other impurities.		
15c.	Lighting - Provision and maintain sufficient & suitable lighting.		
15d.	Drainage - Provision and proper maintenance of drainage system.		
15e.	Sanitary – Sufficient and properly maintained toilet facilities.		
16	**Others**		
16a.	Non-compliance with approved procedures for beam launching work.		
16b.	Failure to control unsafe acts of workers, like pillioning on dumpers / excavators / cranes, improper use of connectors / plugs for electrical equipments, etc.		
16c.	Failure to comply with any written law and byelaws, rules and regulations of any government ministry, statutory boards or other authorities which are applicable or relevant to the execution of the works.		

INSPECTED AND WITNESSED BY:

Inspection done by: Name: Signature, Date and Time:	Subcontractor's Representative (if applicable) Name: Signature, Date & Time:

6 Occupational Safety & Health Management System

6.1 Case Example 6-1

(see also Case Example 1-4)

1) Outline

This is a copy of a certificate of approval given to a corporation whose Occupational Health & Safety Management System has been certified as International Standard OHSAS 18001. In a similar case, a head office, which has obtained ISO 9000, conducts quality and safety management on construction sites.

2) Case Example

The Case Example 6-1 is on the following page.

Occupational Safety & Health Management System	Case Example 6-1

LRQA
Business Assurance

CERTIFICATE OF APPROVAL

This is to certify that the Occupational Health & Safety Management System of:

Company Name

Address etc.

has been approved by Lloyd's Register Quality Assurance
to the following specification:

OHSAS 18001:2007

The Occupational Health & Safety Management System is applicable to:

Project management including management of design, construction and maintenance of civil engineering structures and buildings.

Approval
Certificate No: YKA 4004690

Original Approval: 11 July 2011
Current Certificate: 25 February 2012
Certificate Expiry: 10 July 2014

Issued by: Lloyd's Register Quality Assurance Limited

UKAS MANAGEMENT SYSTEMS
001

This document is subject to the provision on the reverse
71 Fenchurch Street, London EC3M 4BS United Kingdom. Registration number 1879370
This approval is carried out in accordance with the LRQA assessment and certification procedures and monitored by LRQA.
The use of the UKAS Accreditation Mark indicates Accreditation in respect of those activities covered by the Accreditation Certificate Number 001
Mecro Revision 13

6.2 Case Example 6-2

(see also Case Example 5-2)

1) Outline

This is a case where a head office, which has not obtained the international standard, establishes its own standard and conducts PDCA (Plan-Do-Check-Action) cycle based on their own policy.

2) Case Example

The Case Example 6-2 is on the following page.

Occupational Safety & Health Management System	Case Example 6-2 ①

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SAFETY INSPECTION

1 PURPOSE

To identify hazardous situations and to implement remedial action before things can develop to a point where injury or other losses can occur.

2 SCOPE

Applicable to all project operations identified as hazards.

3 REFERENCE

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4 RECORDS

Relevant safety inspection records such as;
Scaffold inspection checklist, equipment inspection checklist, General safe work checklist, etc.

5 PROCEDURE

5.1 **Responsibility**

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5.1.4 Safety officer and his assistants are to carry out site work inspections and safety reports periodically.

5.1.5 The Project Manager or his representative and Construction Managers are to carry out safety inspections monthly.

5.2 **General**

5.2.1 In addition to the safety maintenance and equipment-inspection program,

Occupational Safety & Health Management System	Case Example 6-2 ②

which is an essential operating practice on every site, regular inspection of the workplace must take place.(refer to OCP-08_OHS Maintenance of Machinery)

5.2.2 All inspections, regardless of type, shall be taken place at intervals, as dictated by need.

5.2.3 Middle and senior management shall involve themselves in these inspections by taking part in nominated inspections or conducting their own.

5.3 **Safety Inspections**

5.3.1 Where required by contract, the Safety Officer shall on monthly basis prepare and submit the mandatory safety report to the client with endorsement of Project Manager.

5.3.2 The Safety Officer, Site Supervisor, designated personnel shall conduct various safety inspections with respective subcontractors/site personnel via various inspections checklists.

5.3.3 Further inspection program shall be developed to specify the check items, frequency, checklists, person in charge, etc.

5.3.4 Such program shall comprise but not limited to the followings;

- General safe work
- Scaffolding
- Temporary electrical installation
- Excavation
- Concreting and formwork
- Hot work
- Housekeeping, etc.

5.3.5 Appendix-1 shows the typical checklist for general safe work inspections.

5.3.6 The Safety Officer, Site Supervisor or designated personnel shall keep the inspection records.

5.4 **Remedial Action**

5.4.1 Inspections conducted are to be properly documented in order to specify the corrective actions required, timeframe and responsible person for the actions.

5.4.2 Follow-up is necessary to ensure that remedial works are completed on schedule as committed by the parties concerned.

Occupational Safety & Health Management System	Case Example 6-2 ③

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6 ATTACHMENT

Appendix 1 Sample for safe work inspection checklist

Occupational Safety & Health Management System	Case Example 6-2 ④

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Appendix 1 Sample for General Safe Work Inspection Checklist

OHS CHECKLIST FOR PROJECT SITE

NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
1	**Personal Protective Equipment**		
1a.	Use of Safety helmets.		
1b.	Provision and use of eye protection.		
1c.	Use of safety belt.		
1d.	Provision of ear protection.		
2	**Excavation**		
2a.	Excavation depth > 5m to provide warning sign.		
2b.	Timber plank used for piling at least 50mm thick.		
2c.	Excavation depth > 1.2m provide access ladder.		
2d.	Excavation depth > 4m to provide PE design for shoring.		
2e.	Excavation depth > 1.5m with mechanical digger used, to provide PE design for shoring.		
2f.	Positioning of machinery in dangerous manner.		
2g.	Storage of material 610mm away from the edge of trenches.		
2h.	Failure to protect open cut slope in accordance with approved method statement or design.		
3	**Scaffolding**		
3a.	No wire ties.		
3b.	Proper maintenance of scaffold.		
3c.	Minimum width of working platform is		

Occupational Safety & Health Management System	Case Example 6-2 ⑤

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
	635mm.		
3d.	Sign show maximum load & maximum no. of workers to be placed.		
3e.	Platform projection shall not be less than 50mm or greater than 4 times of thickness of plank used.		
3f.	Plank used shall be flushed and secured.		
3g.	Removal of construction debris from platform.		
3h.	Provision of access ladder to platform.		
3i.	Provision of guard rail for working platform exceeds 3m in height.		
3j.	Provision of bracing from top to base of scaffolding.		
3k.	Erection on solid foundation or well consolidated soil.		
4	**Housekeeping**		
4a.	Cause tripping and cutting hazards.		
4b.	Storage of material cause obstruction to passage way or place of work.		
4c.	Material to stored or stacked in safe manner.		
4d.	Material storage shall not cause danger to persons below or close to edge of platform.		
4e.	Debris shall not accumulated and constitute hazard.		
4f.	Provision of hoarding.		
4g.	Removal of oil, greese, water etc., in which may causes slipping hazard.		
5	**Demolition**		

Occupational Safety & Health Management System	Case Example 6-2 ⑥

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
5a.	Proper method of removal of debris.		
5b.	Provision of catch platform for demolition of exterior wall or roof from a point more than 12m height if persons below are exposed to falling objects.		
5c.	Erection of barricade to prevent unauthorised person(s) entering the demolition project site with warning sign display.		
5d.	Swinging weight method to provide 1.5 times height of structure demolition zone with barricade.		
5e.	Clamshell bucket used to maintain 8m demolition zone with barricade.		
6	**Traffic Control & Road Safety**		
6a.	Failure to provide alternative footpath and directional sign for pedestrians.		
6b.	Closing of any road or lanes leading to traffic jam of 100m or more.		
6c.	Failure to display any or adequate temporary sign, cone, rotating lamp or other indication for temporary road-lanes closure.		
6d.	Failure to maintain barricades, blinkers, rotating lamps in good working condition.		
6e.	Failure to display adequate warning sign at strategic location.		
6f.	Failure to provide barrication with suitable warning sign and light when works carry out near any roads / highways.		
6g.	Placing of equipment / machineries, debris, material or thing in such a manner as to cause obstruction to		

Occupational Safety & Health Management System	Case Example 6-2 ⑦

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
	persons using the public street and pedestrian footway.		
6h.	Failure to rectify road depression or potholes immediately.		
6i.	Failure to provide collision attenuator / truck mounted attenuator (TMA) for works on road with speed limit 70kph and above.		
7	**Cranes**		
7a.	Sound underlying material for footing.		
7b.	Provide capacity chart.		
7c.	Indicator for safe working load correspond to radius of jib and warning sign when radius is unsafe.		
7d.	No travel of crane with suspended load.		
7e.	Provision of lifting the Site Supervisor and signal man.		
8	**Electrical**		
8a.	Provision of proper warning sign in 4 official languages where electrical circuit exists.		
8b.	Protective measures taken to prevent damages.		
8c.	Wiring supported on proper insulator and not looped over rails or brackets.		
8d.	No wiring shall be left on ground or floor and shall be protected.		
9	**Safe Means of Access**		
9a.	Safe means of access to be provide to working levels above or below ground.		
9b.	Provision of hand hold to ladder.		
9c.	Ladder shall not stand on loose bricks or		

Occupational Safety & Health Management System	Case Example 6-2 ⑧

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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
	loose packing.		
9d.	Ladder shall be securely fixed.		
9e.	No undue swaying of ladder.		
10	**Piling**		
10a.	Piling hammer shall be lowered to ground if is not in use.		
10b.	Provision of permanent ladders.		
10c.	Warning sign provided at 50m away from test pile area.		
10d.	Sound footing for advancing of pile driver.		
11	**Falling Hazard**		
11a.	Open side or opening shall be guarded or covered.		
12	**Prevention of Fire**		
12a.	Provision of fire extinguishers.		
13	**First-Aid**		
13a.	Provide and maintain First-Aid boxes.		
13b.	Employment of first aider for factory more than 25 persons.		
14	**Safe Place of Employment**		
14a.	All places of work, floors, steps, stairs, passages, gangways, must be properly maintained and free from obstruction.		
14b.	Secure foothold & handhold shall be provided if a person is liable to fall from more than 3m; provision of safety belt, fencing, net and secured anchorage.		
15	**Health Requirements**		
15a.	Cleanliness – Work place to be kept clean and free from effluents.		

Occupational Safety & Health Management System	Case Example 6-2 ⑨

OHS	OCECD OPERATIONAL CONTROL PROCEDURE	Section 2	
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NO	DESCRIPTION	Report of visit (tick if observed or NA if not applicable)	Location & other remarks
15b.	Ventilation-Provision of ventilation for work place which generate harmful gases, vapours or other impurities.		
15c.	Lighting - Provision and maintain sufficient & suitable lighting.		
15d.	Drainage - Provision and proper maintenance of drainage system.		
15e.	Sanitary – Sufficient and properly maintained toilet facilities.		
16	**Others**		
16a.	Non-compliance with approved procedures for beam launching work.		
16b.	Failure to control unsafe acts of workers, like pillioning on dumpers / excavators / cranes, improper use of connectors / plugs for electrical equipments, etc.		
16c.	Failure to comply with any written law and byelaws, rules and regulations of any government ministry, statutory boards or other authorities which are applicable or relevant to the execution of the works.		

INSPECTED AND WITNESSED BY:

Inspection done by: Name: Signature, Date and Time:	Subcontractor's Representative (if applicable) Name: Signature, Date & Time:

6.3 Case Example 6-3

1) Outline

This format is a record for toolbox meeting in which contents of works for the day, attentions on safety, health and hygiene, methodologies for work and signatures of all attendees are to be filled. (Case Example 6-3).

Likewise toolbox meetings, "Three Five-Minute Activity Campaigns": 1) five-minute safety talks before starting work, 2) five-minute safety confirmation at the start of work and 3) five-minute cleaning before ending work, are practiced by this corporation. Samples of documents are omitted in this case.

2) Case Example

The Case Example 6-3 is on the following page.

Occupational Safety & Health Management System	Case Example 6-3

FR:TBM-01

Signature Chữ kí

Toolbox Meeting

Báo cáo an toàn hàng ngày

Site Công trường		Date (ngày)	
Cooperation company		Foreman Đốc công	

Today's content of work (Nội dung công việc)	Safety hygiene attention (Chú ý về an toàn)
1.	
2.	
3.	
4.	
5.	

Clean up the working place 10 minutes before ending work. (Dọn dẹp công trường thi công 10 phút trước khi ra về).

We do so. (measures). Biện pháp đảm bảo an toàn	Check before it works (The check is ○ sign.) Kiểm tra trước khi làm việc	
1.	1.	
2.	2.	
3.	3.	
4.	4.	

All workers' signatures Chữ kí của tất cả công nhân			Number of people Số lượng người			Attention Chú ý
1.		○ : Newcomer Thành viên mới	11.		○ : Newcomer Thành viên mới	・Take proceedings of the safety meeting after the morning gathering, and pass the person in charge each foreman. - Buổi họp an toàn bắt đầu sau khi tập thể dục buổi sáng. ・All worker names are signatures of own handwriting. - Lấy chữ kí của tất cả công nhân. ・To newcomers put ○ sign to the own handwriting signature column, and let them receive the newcomer education. -Thành viên mới phải kí vào trong cột chữ kí.
2.			12.			
3.			13.			
4.			14.			
5.			15.			
6.			16.			
7.			17.			
8.			18.			
9.			19.			
10.			20.			

We finished our work without accident so that I report and leave. Chúng ta phải kết thúc công việc mà không có tai nạn. Đến cuối ngày đốc công phải báo cáo cho cán bộ an toàn.	Foreman: Đốc công

6.4 Case Example 6-4

1) Outline

This is another toolbox meeting format which differs slightly from the earlier example, Case Example 6-3-1. It consists of fill-out forms of the work, quality and safety attentions and safety instructions posed by contractors. It also works as risk assessment sheet as it requires each worker to check by him/herself on potential risks, hazards and preventive measures that should be taken on the day.

2) Case Example

The Case Example 6-4 is on the following page.

Occupational Safety & Health Management System	Case Example 6-4

Tool Box Meeting Record

Date	Year	Month	Day	Hour	Company name		Person in charge	

Person's name (In own handwriting and the full name).

ID. No.	Name	ID. No.	Name	ID. No.	Name	ID. No.	Name
1		6		11		16	21
2		7		12		17	22
3		8		13		18	23
4		9		14		19	24
5		10		15		20	25

(1) Content of meeting

Description of works	Safety instruction and notes
Quality, environmental instruction, and notes	

(2) Today's risk assessment

1. Potential Risk/Hazard(What's the risk today?)	2. Preventive Measure(How are you prevent?)

Where there an injury or neither sickness nor leaving work before finish time, etc.	*No*	*Yes*	Person in charge		Project M				Duty Safety	

Note	

Tool Box Meeting

6.5 Case Example 6-5

1) Outline

This is a sample of reviewed Safety Plan Document. This extract of Safety Plan Document is shown as Case Example 6-5.

2) Case Example

The Case Example 6-5 is on the following page.

Occupational Safety & Health Management System	Case Example 6-5

and improvement.

6. Management Review

6.1 Site safety Management Committee (SSMC)

Objective and Function

A Site Safety Management Committee (SSMC) shall be established to review and monitor the implementation of the safety plan, effectiveness of the safety and health measures taken and seeking the co-operation and commitment of staff at all levels. The SSMC meeting will be held every month with participants of Representatives from the Employer and the Consultant, with Contractor representatives.

Other than SSMC meeting the management having weekly progress meeting held on site office every Sunday, during this meeting discussing all weekly safety aspects and correction requirements discuss with management.

Terms of Reference:

1. To ensure the implementation of project safety plan or the contractor' site safety obligations set out in the contract;
2. To review and monitor the effectiveness of the safety and health measures taken on sit and recommend for improvement;
3. To review the established safety rules, risk assessments or safe working procedures.
4. To discuss hazards associated with the sit operations and necessary safety precautions.
5. To co-ordinate the interface safety measures of all subcontractors, utility undertakers or other construction parties working on the site;
6. To promote safety publicity and training;
7. To discuss and review the emergency and rescue procedures;
8. To review accidents those have occurred so as to recommend measures to prevent recurrences;
9. To review the accident statistics and safety performance of subcontractors;

Organization:

Chairman: Project Manager

- To chair the committee meeting and make final decision for opinions or disputes arising from the meeting.

Secretary: Safety Manager / Safety Officer

- To call meetings, professional OHC advices; take meeting minutes and follow-up matters

6.6 Case Example 6-6

1) Outline

This document shows the amendment process of Safety Plans submitted by a corporation which controls PDCA cycle based on its own standard of safety management.

2) Case Example

The Case Example 6-6 is on the following page.

Occupational Safety & Health Management System	Case Example 6-6

SECTION 1 : SAFETY POLICY STATEMENT

SAFETY AND HEALTH POLICY

Safe construction is a social commitment that all companies should fulfill. We strive for the consolidation and the improvement of the safety and health environment so that all workfolk can feel secure, and also being accepted from society with the confidence and empathty as the basis of corporate activities of “Thorough Pursuit of Safety First”.

1. ELIMINATION OF ACCIDENT AND INJURY

We not only comply with the provisions of Occupational Safety and Health Regulations and Health Regulations and Our Construction Safety and Health Control, but also aim to eliminate all accidents and injuries with responding to the variety situations and managing the adequate safety and health.

Especially to the specified works as “Priority Measures” and “Priority Dangerous Work and Dangerous Work”, we attempt to prevent any accident with concentrated efforts.

2. ACCIDENT PREVENTION TO THIRD PARTIES

Accidents to the community must be definitely avoided with every maginable means.
Particularly for the construction at urban districts, the construction plan that includes the measures of accident prevention to the third parties as the most important aspect should be drawn up and implemented thoroughly.

3. IMPROVEMENT OF SAFETY AND HEALTH STANDARDS

We strive for the education of safety and health to the project office persons involved and enhance the standard level of safety and health continuously with managing the cycle of “Plan- Do - Check- Act“ (=Improvement)approproately Based on “Occupational Health and Safety Management System” that specifies in reducing any risk at the job site steadily.

Under these policies, all employees of ○○ and subcontractors should bring together their own management skills and enthusiasm for safety, and strongly develop the compulsory activies of safety and health managemant.

7 Partnership with Locals etc.

7.1 Case Example 7-1

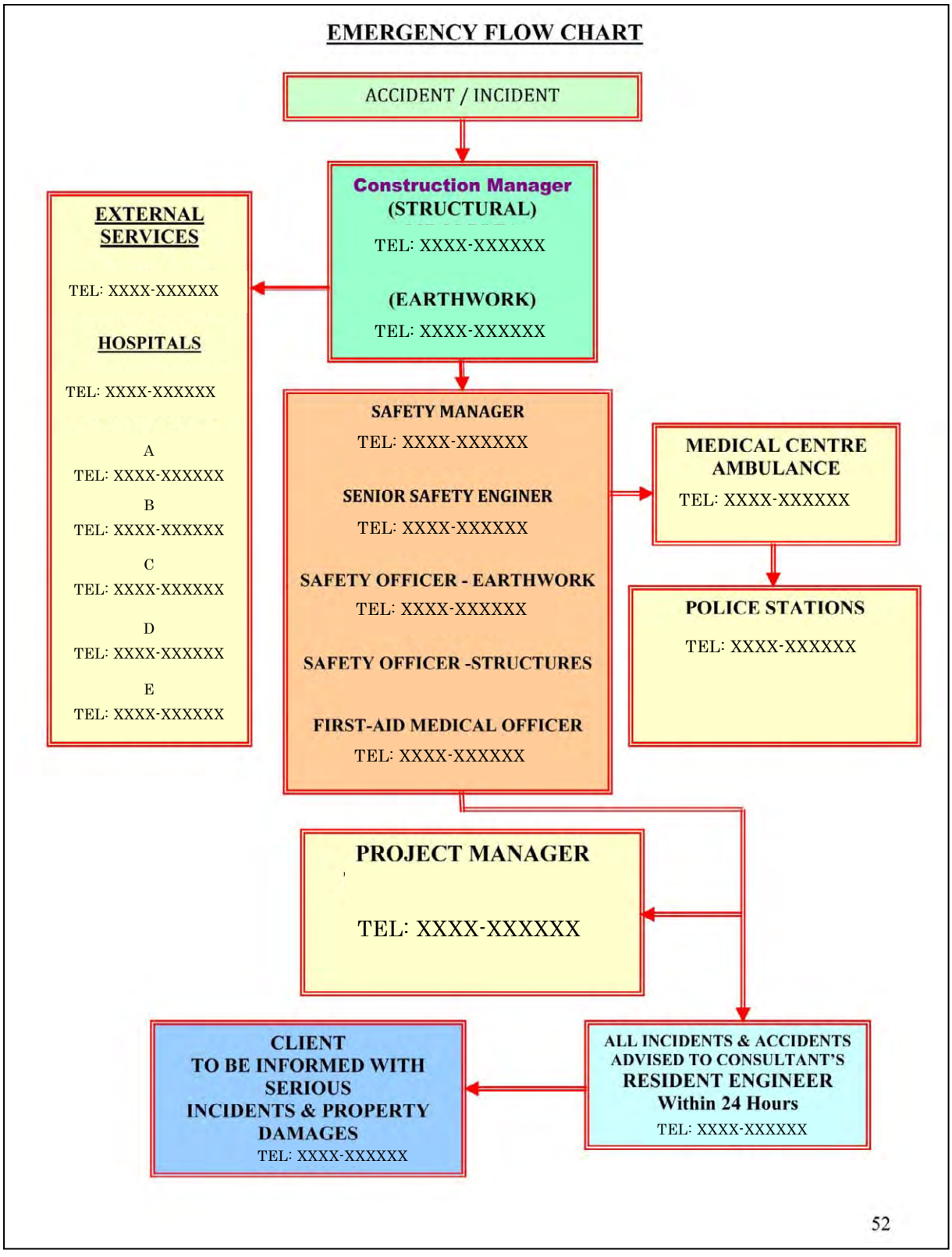
1) Outline

This is an emergency flow chart which shows contact addresses of person(s) in charge of the project and relevant agencies (the Engineer and the Employer). It also includes contact addresses of the police station, the fire station, and the major hospitals.

2) Case Example

The Case Example 7-1 is on the following page.

Partnership with Locals etc.	Case Example 7-1



7.2 Case Example 7-2

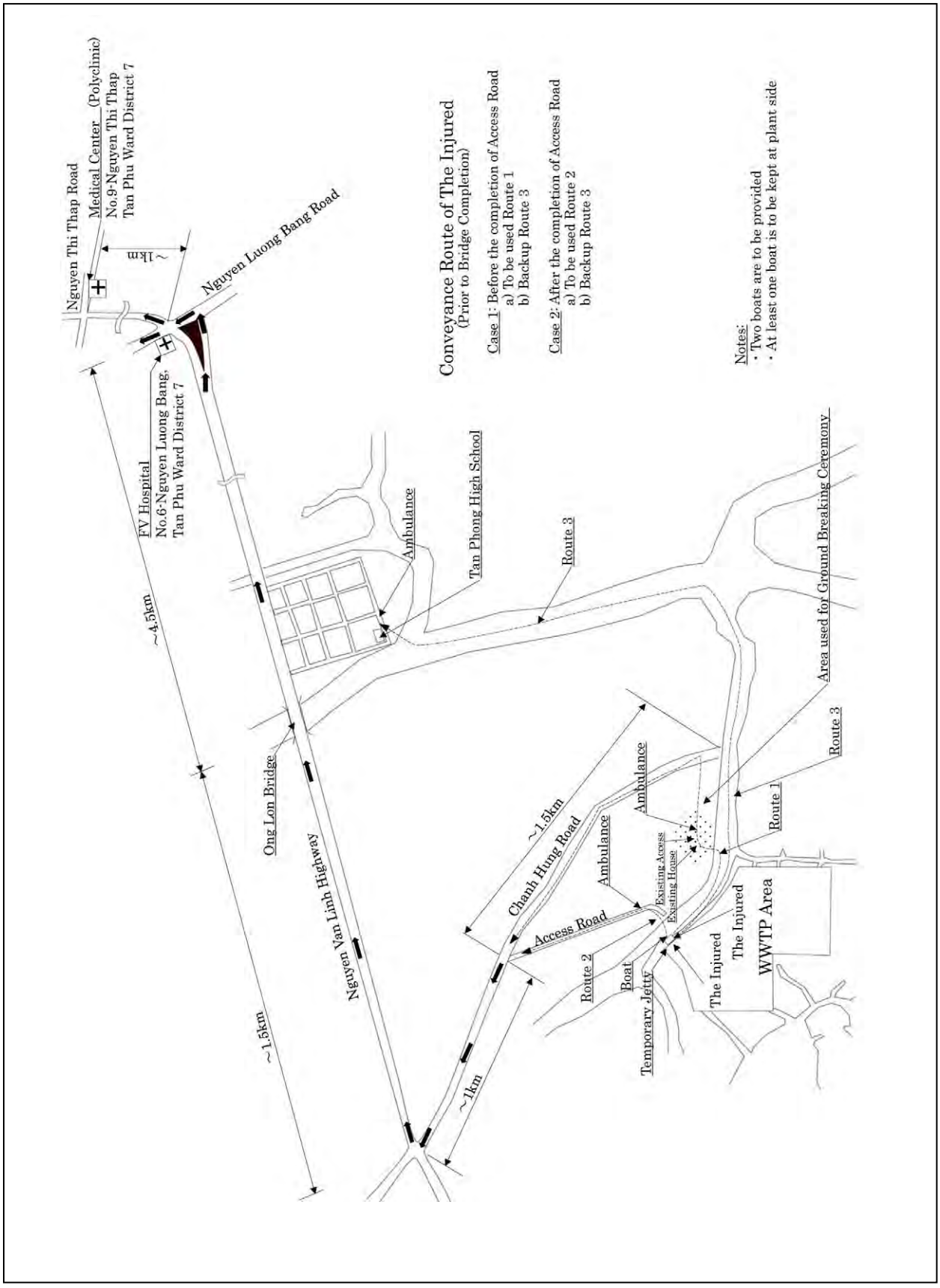
1) Outline

In addition to the emergency flow chart, this document is elaborated to use a route map for obtaining easy understanding of conveyance of the injured (the route which should be taken to send injured workers to the hospital) (Case Example 7-2). The main priority and focus of safety management are placed on the workers at construction site. This corporation conducts monthly safety meetings, suggest initiatives and review safety management activities, in order to further develop safety awareness and improve measures of safety management.

2) Case Example

The Case Example 7-2 is on the following page.

Partnership with Locals etc.	Case Example 7-2 ①



Partnership with Locals etc.	Case Example 7-2 ②

PROJECT NAME

PROJECT SAFETY PLAN

		appropriate measures to be taken; ・ Review of sub-contractors safety performance.	
Monthly	Project Manager Construction Managers Chief manager The Engineer The Employer Subcontractors Project Manager	・ Present overall safety performance and statistics of the Project; ・ Identify good practice and bad practices; ・ Identify the following months training program; ・ Appraise the participants of the training carried out to date; ・ Proposal of incentives; ・ Open discussion;	・ Contained in the Monthly Report and presentation material;

3.04
Safety Information and Training

With reference to the OHSRP Section 7, the training and briefing are in principle the same:

Safety Inductions

All persons that are and shall be engaged on this Project shall be required to undergo an initial Safety Induction. The Safety Induction shall be conducted in English and Vietnamese. The Safety Manager and/or delegates shall conduct the Safety Induction. The Safety Induction is mandatory to any person wishing to visit/enter/work on or within the Project site. The induction shall include but not limited to:

7.3 Case Example 7-3

1) Outline

This shows an example of safety management plan at the construction site where there is a high possibility of influence from active volcanoes. The plan states own evacuation policy and the monitoring system specified this volcanic environment, which are both mentioned in Safety Plan Document.

2) Case Example

The Case Example 7-3 is on the following page.

Partnership with Locals etc.	Case Example 7-3 ①

Form 12 - Working Safety Plan

13.4.7 Evacuation Plan

13.4.7.1 Introduction

The project area is located at foot of Mt. Merapi, which is one of the most active volcanoes in Indonesia. Merapi volcano activity is characterized by a very frequent eruption ranging from 1 to 5 years of time duration, (last eruption took place in 2006), and eruption is usually accompanied by the debris flows which occur with intensive rainfall.

Therefore, in case an eruption or debris flow took place during construction period, evacuation plan shall be prepared properly to ensure workers' lives and the Employer and the JO's properties.

13.4.7.2 Collection of Volcanic, Weather Information

a) Governmental observatory

Volcanic and weather information are provided from monitoring post under the control of Volcanologi office established by Indonesian Government for monitoring volcanic activities. There are three monitoring post office around the project area, which are Babadan, Turgo and Balerante. Table 5 shows names of monitoring post and facility codes which are related to nearest monitoring post. Emergency information as to volcano activities and weather is transmitted through HT. In view of this at least one HT shall be allocated each site with specified frequency.

The JO's supervisors and safety staff shall always pay adequate attention to those information and in case intercepting alert signal they shall make workers and equipments evacuate from site to secure place as soon as possible.

Partnership with Locals etc.	Case Example 7-3 ②

Form 12 - Working Safety Plan

Table 5. Monitoring Post

No	Observatory	River Basin	Facility Code
1	Babadan	Apu	AP-RD2, AP-RD1a
		Pabelan	PA-RD2, PA-RD5
		Trising	TR-RD1, TR-RD8
		Senowo	SE-RD5, SE-RD6a
2	Turgo	Blongkeng	BL-RD3
		Putih	PU-RD1 ~7
		Batang	BA-RD1 ~ 8
		Bebeng	BE-RD1
3	Balerante	Kuning	KU-RD2
		Woro	WO-RD2

b) The JO's temporary observatory

The JO will establish temporary monitoring observatory to monitor the upstream condition of river such as the change of water flow and level, rain fall and weather. It will provide the information to site as promptly as possible in case debris flow or other disaster caused by intensive rain fall or volcanic activity is likely to take place. A monitoring observatory will be built at three to five kilometers away from uppermost stream site location in each river. A watch man will be stationed at a monitoring observatory while any sites located downstream are under operation. HT will be used as a communication tool.

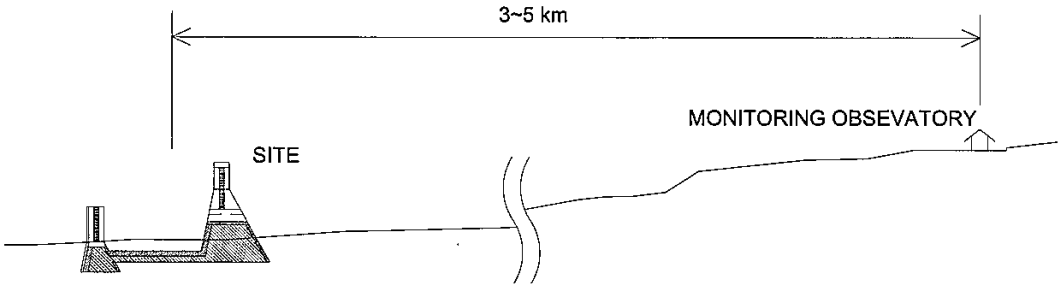


Figure 1. Temporary monitoring observatory

Partnership with Locals etc.	Case Example 7-3 ③

From 12 – Working Safety Plan

13.4.7.3 Emergency Network

Following figure shows the JO's emergency network. The JO will evacuate all workers, the JO's staff and equipment including the Employer's properties following this procedure.

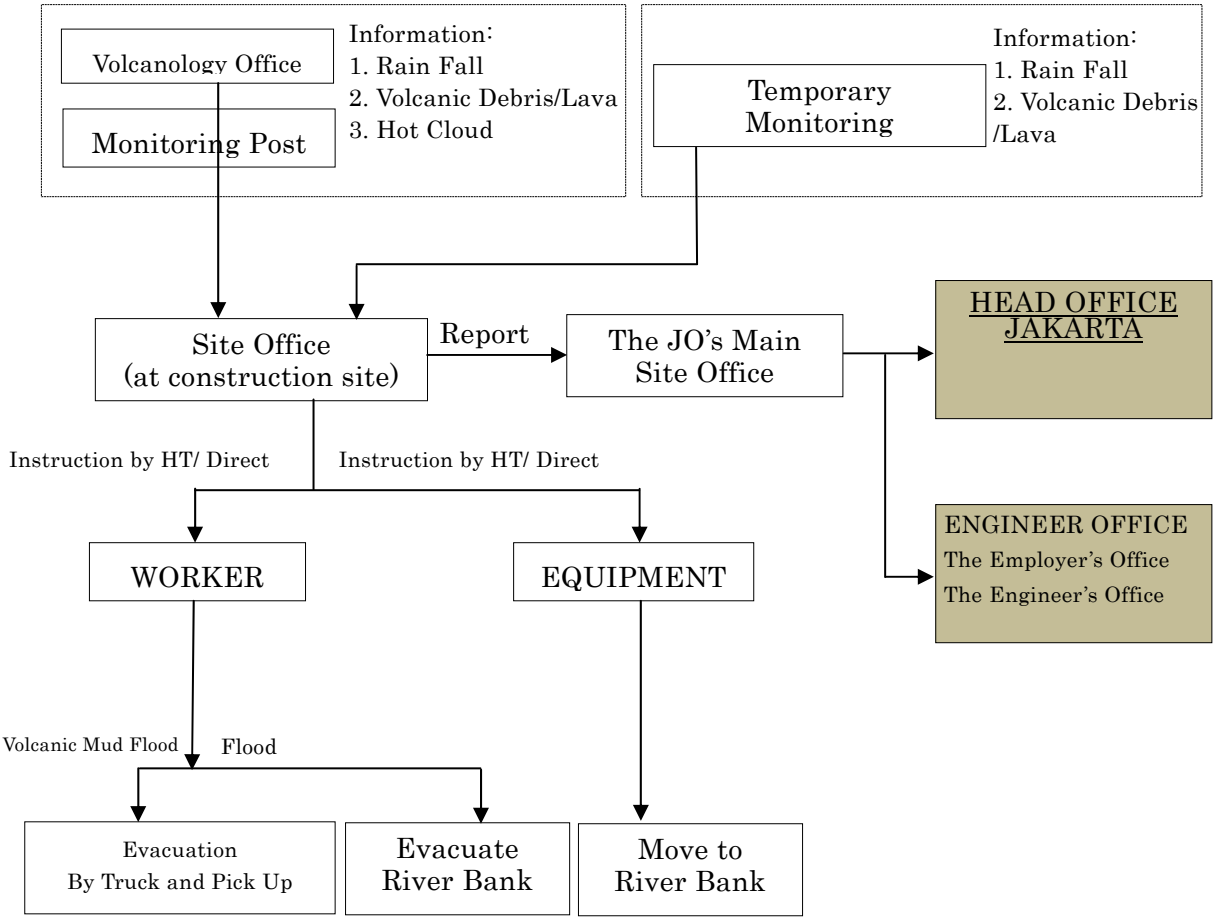


Figure 2. Evacuation Network

7.4 Case Example 7-4

(see also Case Example 2-4)

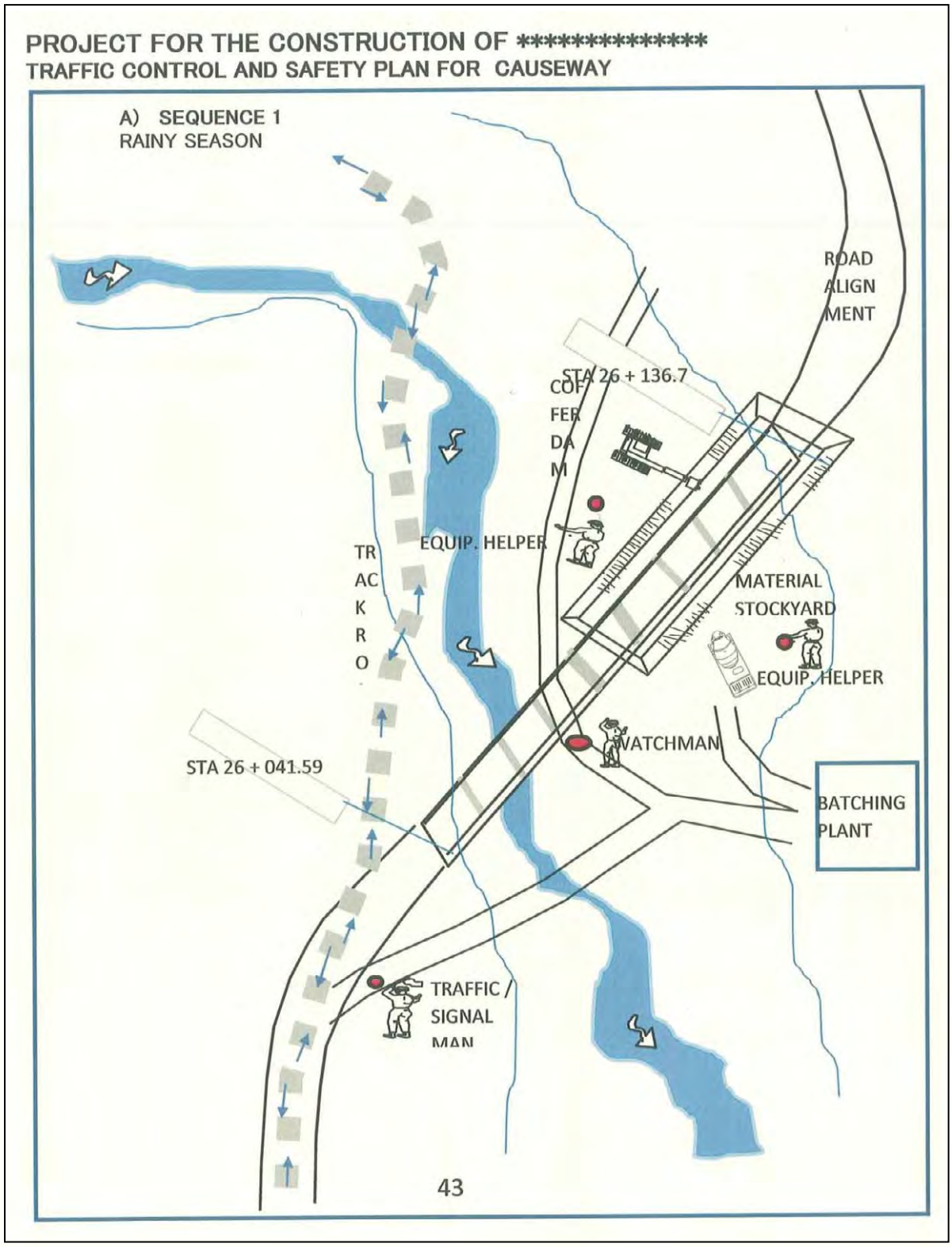
1) Outline

This is a document (traffic control and safety plan for causeway) which shows safety management in an area where there is a high possibility of landslides due to its geographical features and traffic accidents caused by external automobiles.

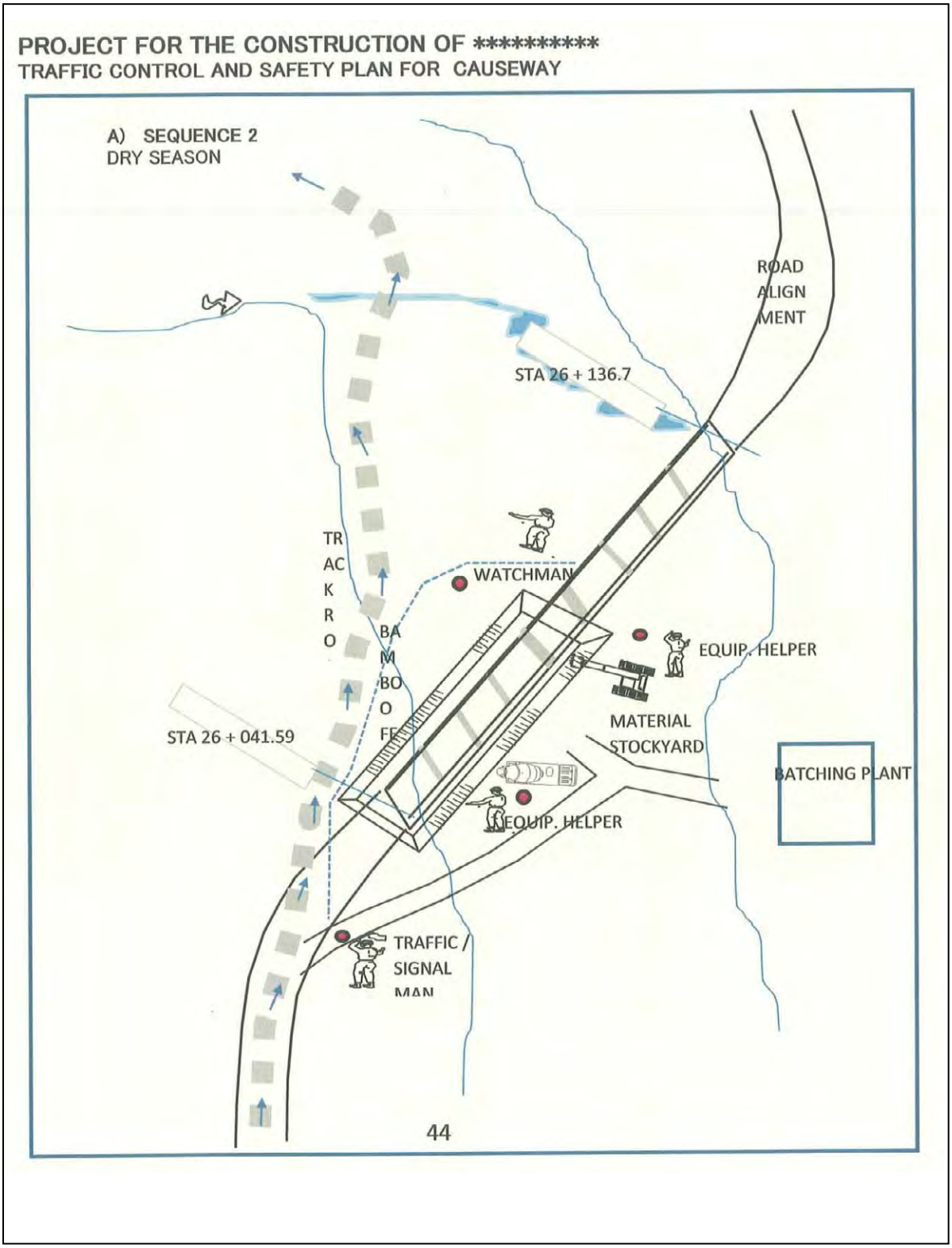
2) Case Example

The Case Examples 7-4-1, 7-4-2 and 7-4-3 are on the following pages.

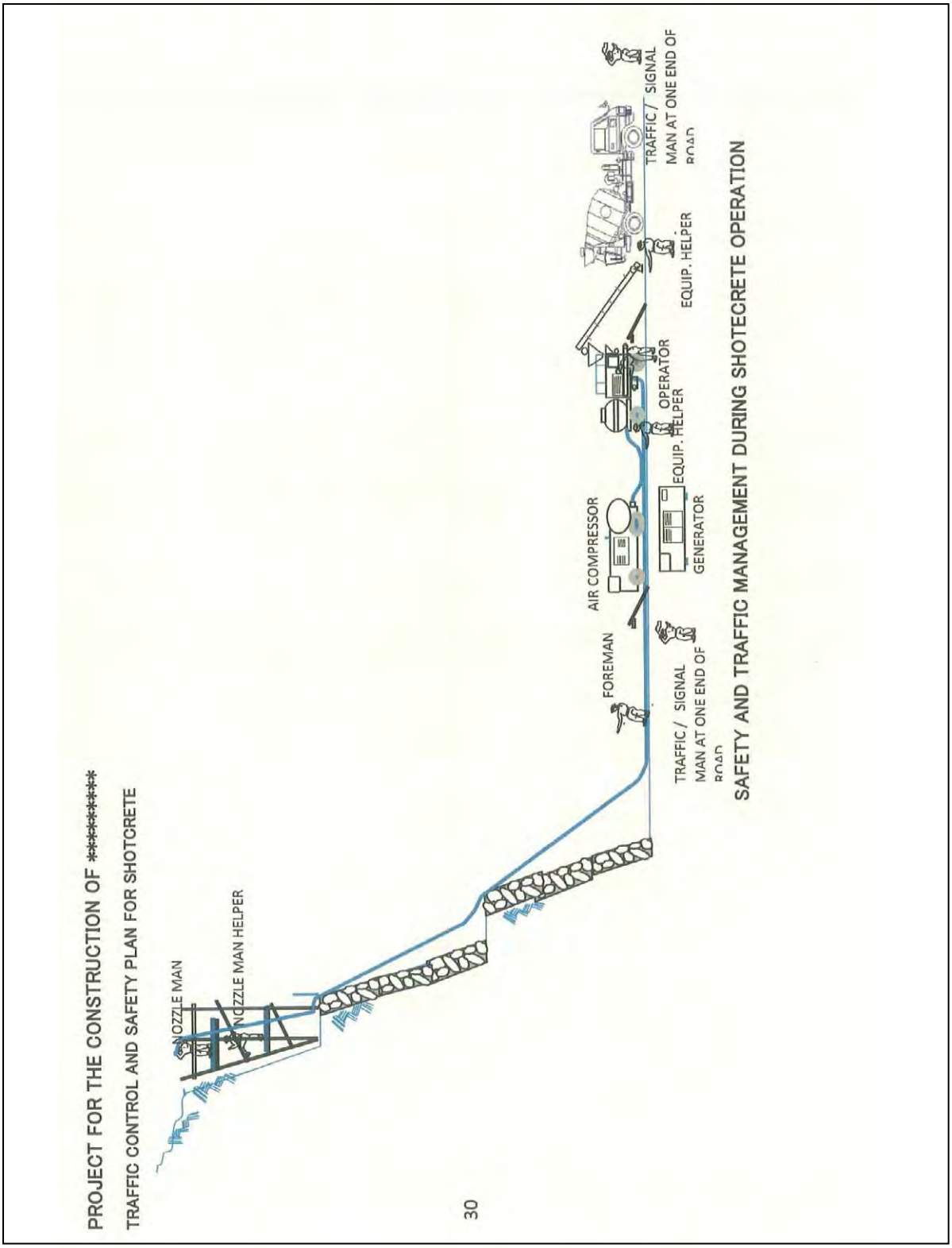
Partnership with Locals etc.	Case Example 7-4-1 ①



Partnership with Locals etc.	Case Example 7-4-1 ②



Partnership with Locals etc.	Case Example 7-4-2



Partnership with Locals etc.	Case Example 7-4-3